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NCHSR

TITLE NUMBER	SHIPMENT NO.
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U.S. national center for health services research
Summary of grants & contracts
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NCHSR

RESEARCH MANAGEMENT SERIES

Summary of Grants and Contracts Active on September 30, 1979

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National Center for Health Services Research

Research Management Series

The *Research Management Series* describes programmatic rather than technical aspects of the NCHSR research effort. Information is presented on the NCHSR goals, research objectives, and priorities; in addition, this series contains administrative information on funding, lists of grants and contracts, and special programs. Publications in this series are intended to bring basic information on the NCHSR and its programs to research planners, administrators, and others who are involved with the allocation of research resources.

Office of Health Research, Statistics, and Technology
Harold Margulies, M.D., Acting Deputy Assistant Secretary for Health Research, Statistics, and Technology

National Center for Health Services Research
Donald E. Goldstone, M.D., Acting Director
Robert A. Fordham, Associate Deputy Director
Isadore Seeman, Director, Office of Program Development

Office of Program Support
Michael O. Glynn, Director
James B. Wechsler, Deputy Director
Ralph L. Sloat, Chief, Grants Operations and Administration Branch
Barry N. Flaer, Chief, Contract Review and Administration Branch

NCHSR

RESEARCH MANAGEMENT SERIES

Summary of Grants and Contracts Active on September 30, 1979

October 1981

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Office of Health Research, Statistics, and Technology
National Center for Health Services Research

DHHS Publication No. (PHS) 82-3317

-980

FOREWORD

The mission of the National Center for Health Services Research (NCHSR) is to undertake and support research, demonstrations, and evaluations on problems in the organization, delivery, and financing of health care services; to serve as the focal point for coordination of health services research within the Public Health Service, Department of Health and Human Services; and to disseminate the findings of health services research to policy and decisionmakers in the public and private sectors.

As the only general purpose independent health services research agency, the NCHSR research effort is directed towards developing new options for the delivery of health services, testing the assumptions on which current health policies and practices are based, and developing improved methods for monitoring the performance of the health care system.

The NCHSR research program is designed to provide needed information to government, the health industry, and consumers of health services. NCHSR relies heavily on an ongoing relationship with policymakers and program administrators at the Federal, State, and local levels, with health care providers, and with consumers to determine what research questions need to be addressed. NCHSR is responsible, as well, for seeing that the findings from research projects are made available to these groups in a truly and effective manner.

In its effort to keep the users of health services research and the research community informed of research activities supported by the NCHSR, a Summary of Grants and Contracts is published on a fiscal year basis. This Summary contains an abstract of each grant or contract supported by the NCHSR classification system which is based on the primary issue a research project is designed to address. In addition, there are included indexes of the projects by grantee/contractor institution; principal investigator or project director; State; and project number.

Anyone wishing further information about the research findings of any grant or contract listed in this publication may correspond directly with the principal investigator or project director. Information concerning the substantive areas of the NCHSR research program may be obtained from Norman W. Weissman, Ph.D., Director, Division of Extramural Research, Room 8-22 Center Building, 3700 East West Highway, Hyattsville, Maryland 20782.

The material for this publication was compiled using the Computerized Compendium (COCO), a computer system designed at NCHSR by Deborah W. Garnick, Nancy A. Hedges, Thomas L. Mitchell, and Ira E. Raskin , to permit automatic storage and retrieval of information on the NCHSR grant and contract programs. This publication was prepared by Nancy A. Hedges and Karyn D. Wions.

Donald Goldstone, M.D.
Acting Director, NCHSR

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NATIONAL CENTER FOR HEALTH SERVICES RESEARCH

CATEGORY	GRANTS		CONTRACTS		TOTAL GRANTS AND CONTRACTS	
	NUMBER	FY 79 $ AWARDED	NUMBER	FY 79 $ AWARDED	NUMBER	FY 79 $ AWARDED
COST CONTAINMENT	31	1,630,297	3	812,900	34	2,443,197
DISSEMINATION	-	-0-	6	1,348,711	6	1,348,711
EMERGENCY MEDICAL SERVICES AND AMBULATORY CARE	42	4,389,118	-	-0-	42	4,389,118
HEALTH CARE AND THE DISADVANTAGED	9	223,932	1	-0-	10	223,932
HEALTH INSURANCE	4	70,859	4	1,956,032	8	2,026,891
HEALTH MANPOWER	15	766,994	1	141,000	16	907,994
HEALTH SERVICES RESEARCH CENTERS	7	4,601,950	-	-0-	7	4,601,950
LONG TERM CARE	15	902,847	2	225,344	17	1,128,191
PLANNING AND REGULATION	22	470,317	3	353,649	25	823,966
QUALITY OF CARE	28	1,903,294	2	989,193	30	2,892,487
SPECIAL STUDIES	4	121,591	5	713,971	9	835,562
TECHNOLOGY AND COMPUTER SCIENCE APPLICATIONS	24	2,873,229	7	1,581,956	31	4,455,185
TOTALS	201	17,954,428	34	8,122,756	235	26,077,184

RECORD NO. HS02994 CATEGORY: COST CONTAINMENT - HOSPITAL STUDIES

TITLE: Maximum Average Occupancy for Hospital Units

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
05-01-78	10-30-80	49,152	142,789	142,789

INVESTIGATOR NAME AND ADDRESS

HANCOCK, WALTON M
UNIVERSITY OF MICHIGAN
1420 WASHINGTON HEIGHTS
ANN ARBOR
MICHIGAN 48109

OBJECTIVE:
To develop a methodology for determining the maximum average occupancy that could be achieved on a nursing unit of a hospital.

APPROACH:
Estimation of MAO will be done for hospital units of varying size using a modification of an existing simulation model. The model will take into account five characteristics of the unit including the number of beds, the proportion of admissions which are emergent, the proportion of scheduled admissions that are elective, the mean length of stay, and the variance of length of stay. Derivatives of the methodology include a technique for ascertaining optimum bed size given various levels of the five factors and estimates of the relative contributions of the five factors in determining MAO.

FINDINGS:
The output of this experiment will consist of two parts. One will be an equation, determined by regression, which will predict maximum average occupancy according to specified levels of the experimental factors and their interactions. The other will be a series of graphs relating maximum average occupancy as the dependent variable to each experimental factor as an independent variable.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03016 CATEGORY: COST CONTAINMENT - HOSPITAL STUDIES

TITLE: The Impact of Collective Bargaining on Hospital Care

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
01-01-78	03-31-80	31,470	84,501	84,501

INVESTIGATOR NAME AND ADDRESS

SALKEVER, DAVID S
JOHNS HOPKINS UNIVERSITY
CHARLES AND 34TH STS
BALTIMORE
MARYLAND 21218

OBJECTIVE:
To examine and identify the impact of unionization of hospital employees on the cost of hospital services, cost per case, and cost per admission for general hospitals in Maryland, Massachusetts, New York and Pennsylvania in 1975. Union impact on costs of the nursing and housekeeping departments will also be estimated.

APPROACH:
The hypothesis of how hospital rate setting affects union impact on costs will be tested, using the technological cost function and behavioral models approach to measure hospital costs. These two approaches will serve as the basis for a variety of models and specifications that will be used to measure union impact. The source of most of the dependent and independent variables, cost, output volume, product mix, will be the Medicare cost reports. Input price data and hospital characteristics are from the AHA and Area-Wage Survey. Regression analysis will be used to test these models.

FINDINGS:
Using this analysis, the principal investigator will investigate the relationship between reimbursement and unionization and, of even greater importance for health planning, the relationship between hospital rate regulation and unionization. This issue has implications not only for three-party collective bargaining but also implications for employment possibilities among currently unemployed.

RECORD NO. HS03186 CATEGORY: COST CONTAINMENT - HOSPITAL STUDIES

TITLE: Comparing Profit vs. Voluntary Multi-Hospital Managements

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-01-78	02-29-80	3,219	32,665	32,665

INVESTIGATOR NAME AND ADDRESS

RAZ, SHMUEL
UNIVERSITY OF TEXAS HLTH SCI CTR HOUSTON
BOX 20036
HOUSTON
TEXAS 77025

OBJECTIVE:
To compare management practices of voluntary and proprietary multi-hospital management structures at both the hospital and headquarters levels for the purpose of providing a greater understanding of the attributes of consolidated hospital systems.

APPROACH:
This dissertation grant will use available secondary source data as appropriate. In addition, a questionnaire will be developed, pre-tested, and distributed to hospital administrators and key corporation representatives surveying a national stratified sample of voluntary and proprietary multi-hospital units concerning characteristics of organizational structure, management practice, environmental factors, patient care, and administrative effectiveness. Cross-sectional comparisons of these data will be made using regression and factor analysis to meet the objective of this study.

FINDINGS:
The results of this study and its analysis will cut across major public and governmental concerns such as multi- hospital system management organization, hospital administration manpower changes, hospital administrator education, quality of care, and hospital cost and savings. It is also expected to provide insights concerning multi-hospital management practices that will be useful for the consolidation notions expressed in P.L. 93-641.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03374 CATEGORY: COST CONTAINMENT - HOSPITAL STUDIES

TITLE: Economic Issues in Reduction of Rural Hospital Capacity

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-78	12-31-79	0	50,205	50,205	CHRISTIANSON, JON B MONTANA STATE UNIVERSITY BOZEMAN MONTANA 59715

OBJECTIVE:
To develop a benefit-cost framework for evaluating the impact of closing rural hospitals, and to develop a predictive model of local community support for rural hospitals based on the results of referenda on hospital bond issues. The results can be used by Health System Agencies in making rational decisions on the appropriateness of rural hospitals.

APPROACH:
Drawing on a synthesis of the relevant benefit-cost theory, a framework for evaluating the benefits and costs of closing rural hospitals will be developed and applied to the hypothetical closure of three rural hospitals. A theoretical model will be developed and will relate voting behavior on hospital bond issues to proxy measures of community benefits and costs. An estimate of the model will be done and will have interpretive and predictive utility.

FINDINGS:
The ambiguity surrounding the status of rural hospitals can be considerably alleviated by the findings which this project can provide, since it should enable health planning agencies to make defensible decisions about rural hospitals with the likelihood of better community support. One of the major problems in rural health care delivery is on what can be done about small rural hospitals, and this research can be an important step toward establishing policy relevance in rural communities throughout the country.

RECORD NO. HS03410 CATEGORY: COST CONTAINMENT - HOSPITAL STUDIES

TITLE: A Goal Programming Model for Nursing Service Budgeting

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-30-81	34,476	34,476	52,821	TRIVEDI, VANDANKUMAR M UNIVERSITY OF WASHINGTON SEATTLE WASHINGTON 98195

OBJECTIVE:
To develop an analytical model for planning budgets in hospital nursing departments and test the model with empirical data so that it could be implemented for planning purposes. A mixed-integer goal planning model has been developed and tested on hypotheticcal data. This project will further refine and test the model with actual data.

APPROACH:
The model is formulated to maximize or minimize some goals (e.g., maximize the surplus in budget or the number of full time nurses; minimize deficit, understaffing or the number of part time nurses, etc.), subject to some specific constraints such as budget, staffing substitution, seniority, hospital policy and coverage, etc. The model will also take into account patient mix and the quality of nursing care. The data regarding these factors for testing the model will be collected from Providence Hospital and Virginia Mason Hospital in Seattle area of Washington State. Questionnaire data for evaluating the cost and benefit of implementing the model will also be collected.

FINDINGS:
The project will be useful to health service planners, hospital administrators and financial managers in planning their nurse staffing; and to regulators in making intra-hospital comparisons.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03438 CATEGORY: COST CONTAINMENT - HOSPITAL STUDIES

TITLE: Cost-containment Through Sharing Multi-hospital Systems and Health Systems Agencies

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-78	04-30-80	0	37,700	37,700	LOVETT, JOSEPH E, JR SISTERS OF MERCY HEALTH CORPORATION 28550 ELEVEN MILE RD FARMINGTON HILLS MICHIGAN 48018

OBJECTIVE:
Document and organize the current knowledge available on multi-hospital systems and the sharing of hospital services and to estimate the benefits of such hospital arrangements. The influence of institutional representatives of multi-hospital systems in a HSA area on cost containment will also be explored.

APPROACH:
A detailed review of the literature will include the abstracting of an indexed inventory of propositions and empirical findings on institutional sharing of services. Building on the literature review an operational definition of shared services will be developed and a compilation of existing data from one multi-State, multi-hospital system for the purpose of estimating benefits will be prepared. A detailed analysis will be developed to address the questions pertaining to the benefits of multi-hospital systems and shared services.

FINDINGS:
The review of the literature will highlight the areas where additional research is needed and will also provide assessment of the characteristics of shared arrangements undertaken in multi-hospital systems. The documentation and discussion of issues related to the benefits of multi-hospital systems in sharing should aid HSA's in recognizing the benefits.

RECORD NO. HS03439 CATEGORY: COST CONTAINMENT - HOSPITAL STUDIES

TITLE: Involving Physicians in Hospital Cost Containment

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-78	09-30-79	0	43,525	43,525

INVESTIGATOR NAME AND ADDRESS

RIECKEN, HENRY W
UNIVERSITY OF PENNSYLVANIA

PHILADELPHIA
PENNSYLVANIA 19174

OBJECTIVE:
To involve physicians with other hospital staff in developing and testing an experimental intervention which uses organization behavioral theory to measurably improve cost containment efforts in hospitals.

APPROACH:
Starting from the two-fold premise that physicians' decisions control 80-90 percent of the cost variance in hospitals and that these decisions are made with primary concern for the level of care rendered, with minimal concern for cost, an experimental intervention will be undertaken to reorientate physicians' decisions to a greater concern for cost containment, employing principles known to relate to "successful" organizational change. There are: change efforts which are characterized by collaboration, a participative orientation, and high levels of participation by the "change agent;" and a control system marked by (1) clarity (2) a strong relationship between performance and reward, (3) individual control and influence together with a mechanism for feedback concerning system function.

FINDINGS:
The proximate goals of this research are to test an experimental technique involving the participation of physicians in a decision-making process relating to cost containment, the provision of feedback to them concerning the relationship of their decisions to cost control and to thereby modify their behavior in the direction of cost consciousness and cost control. A collateral goal is to design a full-scale experiment to test the technique in several hospitals, using controls.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03478 CATEGORY: COST CONTAINMENT - HOSPITAL STUDIES

TITLE: A Model for Assessing and Effecting Hospital Closures

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-78	11-30-79	0	35,000	35,000

INVESTIGATOR NAME AND ADDRESS

GETSON, JACOB
MASSACHUSETTS OFFICE OF HUMAN SERVICES
100 CAMBRIDGE ST, RM 904
BOSTON
MASSACHUSETTS 02202

OBJECTIVE:
To identify the characteristics which are associated with hospital closure or "buy-out" for the purpose of developing a modeling methodology which can be used to examine the financial incentives associated with the closing of hospitals.

APPROACH:
Using a listing of characteristics which have been present in a significant number of closure situations in Massachusetts the characteristics will be placed in order of frequency and importance. An analysis using financial statements of acute care hospitals submitted to the Massachusetts Rate Setting Commission and other agencies will be developed to identify the factors that might prevent or delay closure and determine what incentives might be used to encourage closure. The benefits of using the system will be developed so that it could be determined if net savings to the community would actually result.

FINDINGS:
The study is expected to demonstrate how the financial oriented portions of planning and regulatory systems can be used in developing indicators of good closure prospects and in quantifying cost effects in the health care system. As assessment methodology which uses the kinds of data which will become generally available as planning and regulatory structures will be developed and tested.

RECORD NO. HS03674 CATEGORY: COST CONTAINMENT - HOSPITAL STUDIES

TITLE: A Study of Investment Behavior in Community Hospitals

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-79	06-30-81	17,925	17,925	29,981	FARLEY, DEAN E PRINCETON UNIVERSITY PRINCETON NEW JERSEY 08540

OBJECTIVE:
To investigate the determinants of investment behavior in U.S. community hospitals. The decision by hospitals to acquire new capital equipment and facilities and related interhospital competition for capital formation will be examined.

APPROACH:
The decision by hospitals to acquire new capital equipment and facilities will be examined at the theoretical and empirical levels. Time element, e.g., lagged adjustment in investment and expected capital gains, will be considered. In general, the research will take into account the following dimensions: (a) inter-hospital non-price competition; (b) institutional objectives; and (c) dynamic rather than static specification.
Hospital data of Pennsylvania (CHSS Hospital Survey, Medicare Cost Reports and the AG-12 reports filed by the hospitals with the state Comptrollers's office) will be utilized. Additional data from one more state, possibly New Jersey or South Carolina, may also be used for analysis.

FINDINGS:
This study will offer better understanding of hospital behavior in capital expenditure and investment, which will then be helpful for health planners and administrators, especially regarding cost containment and regulation.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03680 CATEGORY: COST CONTAINMENT - HOSPITAL STUDIES

TITLE: Comparison of Alternative Market Forms of Hospital Foods

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
05-15-79	02-15-80	19,078	19,078	19,078	FRANZESE, RITA NEW YORK UNIVERSITY WASHINGTON SQ NEW YORK NEW YORK 10003

OBJECTIVE:
To describe the market forms in which selected patient menu items are purchased in hospitals; determine whether differences exist across market forms in terms of cost, nutrient value and quality and ascertain the relationship of nutrient value and quality to the cost of food.

APPROACH:
General short-term hospitals in New York City using cycle menus are to be surveyed and menu items classified and analyzed by market form. Three menu items that are frequently offered to patients in two-thirds of the hospitals surveyed, and that are purchased in many market forms will be selected for cost, quality and nutrient value analysis.

FINDINGS:
This research will provide methodology for measuring differences among market forms of menu items and provide insight into current trends of hospital food systems.

RECORD NO. HS03695 CATEGORY: COST CONTAINMENT - HOSPITAL STUDIES

TITLE: An Economic History of the Community Hospital Sector

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	03-31-81	25,353	25,353	25,353

INVESTIGATOR NAME AND ADDRESS

KINGSDALE, JON M
UNIVERSITY OF MICHIGAN

ANN ARBOR
MICHIGAN 48109

OBJECTIVE:
To describe and analyze the growth, sponsorship and financing of American community general hospitals from the 1870s to the 1930s.

APPROACH:
Economic factors (differential development for profit and non-profit hospitals in different time-periods), the influence of support from philanthropists, ethnic groups, churches, and various payment mechanisms for hospital services will be explored through historical research. Data will be obtained by documenting changes in the number of hospitals prior to 1890, by examining previously unused national survey data, and by plotting patterns of hospital growth throughout the period under study by examining local history sources. Origins and early developmment of pre-payment plans will be included. The Medical Registry and Directory will be the source of the national data, while historical sources in Maryland, Virginia and one mid-west and one far-west site will be utilized as local data.

FINDINGS:
This research should generate information to address such issues as the objectives of the non-profit hospital, capital expenditure patterns, and the structure of health care financing systems. Under Public Law 93-641, Health Services Agencies (HSAs) have responsibility for the future planning and allocation of health care resources. This study is expected to provide additional information on the etiology of American community general hospitals, as well as assist HSAs in long-term planning and administration of health care services.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03831 CATEGORY: COST CONTAINMENT - HOSPITAL STUDIES

TITLE: Impact of "Per-Case" Versus "Per-Service" Hospital Reimbursement

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-82	103,612	103,612	336,347	STEINWACHS, DONALD M JOHNS HOPKINS UNIVERSITY CHARLES AND 34TH STS BALTIMORE MARYLAND 21218

OBJECTIVE:
To compare the impact of two prospective reimbursement (PR) mechanisms in Maryland -- "per case" and "per service" -- on hospital costs, productivity and patterns of care.

APPROACH:
Maryland has established a Health Services Cost Review Commission (HSCRC) while also having instituted prospective service-specific rates with each hospital. These rates are periodically adjusted to reflect national indices of inflation. Most recently, selected hospitals have been put on a "per case" system called Guaranteed Inpatient Revenue (GIR) that sets a fixed level of revenue per admission classified by diagnosis. Using a before and after analysis of hospital discharge data and reviewing accounting reports for comparison with hospitals not under GIR, the impact of GIR will be evaluated. Currently, 17 of 46 non-Federal acute care hospitals in Maryland are under GIR arrangements. Various specific hypotheses are to be tested using primarily a multiple regression technique. A number of independent and dependent variables along with their expected relationship are identified for testing various hypotheses focused on (1) length of stay, (2) use of ancillary service, (3) cost per day, and (4) total cost. Data includes hospital discharge data, HSCRC data and Medicaid and Medicare data for Maryland.

FINDINGS:
This is an evaluation of a unique program of reimbursement, which appropriately builds upon and extends results of previous evaluations of prospective (per-service) reimbursement. These evaluations documented small (but not statistically significant) savings. Prospective reimbursement is viewed as an important way to control hospital costs and new and more sophisticated versions are now being developed.

RECORD NO. 230750179 CATEGORY: COST CONTAINMENT - HOSPITAL STUDIES

TITLE: Mount Sinai Hospital Work Quality Demonstration Project

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-29-75	04-30-80	0	358,000	358,000

INVESTIGATOR NAME AND ADDRESS

LAWLER, EDWARD E., III
UNIVERSITY OF MICHIGAN

ANN ARBOR
MICHIGAN 48106

OBJECTIVE:
To demonstrate and evaluate techniques for improving labor-management cooperation in a large urban community hospital; to permit employee participation in the development of new approaches to organize their work; and to evaluate the effects of these efforts on efficiency and cost containment objectives.

APPROACH:
The project utilizes an approach developed by the University of Michigan and the American Center for the quality of Working Life which has been used in demonstrations in other industries. This approach involves the development of joint labor-management committees, assisted by an outside facilitator, which "manages" the project and decides upon changes to be made in the way work is organized and accomplished. The effects of these innovations are evaluated using measure of output, employee satisfaction, turnover, etc. In this case, two surgical wards were used as the experimental units and additional work was done with clinical support units, such as radiology, blood bank and pathology as they interfaced with these wards.

FINDINGS:
For several reasons, the evaluation of this experiment showed that no change occurred in the experimental units at Mt. Sinai Hospital during the demonstration. This was largely due to the fragmented authority within the hospital, e.g., the committee could not resolve issues relating to nurses' hours and staffing which were among the most important issues discussed. The hospital itself was subject to rigid reimbursement limits and, hence, union participation in the experiment was limited.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 233783001 CATEGORY: COST CONTAINMENT - HOSPITAL STUDIES

TITLE: Development of Data Files on Hospital Utilization & Community Characteristics

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
01-12-78	06-11-81	609,440	1,999,603	2,101,815	MCCORD, JOHN J SYSTEMETRICS, INC 222 EAST ANAPAMU STREET SANTA BARBARA CALIFORNIA 93101

OBJECTIVE:
To develop a series of data files on a national sample of 450 non-federal short-term general and 50 Veterans Administration general medical and surgical hospitals to support the Hospital Cost and Utilization Project.

APPROACH:
Four primary data files are being constructed for the years 1970-77; a) Hospital characteristics, costs, & revenues; b) Patient characteristics and use of services; c) Physician characteristics; d) Community socio-demographic & medical market characteristics. Only secondary sources of data are being used. The data files are subject to strong confidentiality measures regarding access and use.

FINDINGS:
The results of the planned research should enable better understanding of the behavior of the hospital, especially regarding the determinants of case mix and service intensity, and should assist in formulating and evaluating policies on reimbursement, capital acquisition, and medical staffing patterns.

RECORD NO. HS02132 CATEGORY: COST CONTAINMENT - DRUG STUDIES

TITLE: Evaluation of the Impact of Drug Substitution Legislation

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-30-76	03-31-81	273,908	861,374	861,374

INVESTIGATOR NAME AND ADDRESS

GOLDBERG, THEODORE
WAYNE STATE UNIVERSITY

DETROIT
MICHIGAN 48202

OBJECTIVE:
To examine the effects of legislation aimed at reducing prescription drug costs by substitution of generic equivalents.

APPROACH:
Grantee will collect data on substitutable prescriptions in Michigan (state with substitution legislation) and in Wisconsin (control state). Pharmacy students will collect information on drug names, strength, quantity, payment sources, prescriber, etc. A sample of 100 to 130 pharmacies will be selected with 800 to 1000 prescriptions reviewed in each. Drug price will be analyzed by time period, therapeutic category, percent of drugs prescribed potentially substitutable, and percent actually substituted.

FINDINGS:
It is expected that analysis will show that prices will be lower, that doctors will write "Dispense as Written" less frequently, and pharmacists will exercise their substitution potential more often and thus demonstrate cost containment in the state with drug substitution legislation.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02658 CATEGORY: COST CONTAINMENT - DRUG STUDIES

TITLE: Expansion of the Iowa Capitation Study

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
03-01-78	02-28-83	172,069	369,703	1,192,497	NORWOOD, GEORGE J UNIVERSITY OF IOWA IOWA CITY IOWA 52242

OBJECTIVE:
To study the major problems that were apparent in a pilot project which avaluated the effects of capitation payment to pharmacies for drugs dispensed to Iowa Medicaid patients and to test capitation reimbursement on a larger portion of Medicaid population of the state, including several metropolitan areas.

APPROACH:
The proposed study has 3 phases. During Phase I capitation rates will be determined, educational and pharmacist prompting packages developed, and administrative problems resolved. Phase II will encompass the institution of capitation payment for the Medicaid drug program in half the state. After the first 8 months of Phase II an evaluation will be made in terms of the cost & quality of drug therapy comparing capitation to fee-for-service. If the results are positive, Phase III will include expansion of capitation payment to a state-wide basis with a replication of the cost and quality assessments. The system encourages pharmacists to reduce their costs, switching to nonprescription or generic equivalents where appropriate, & increasing the quantity of the drug dispensed to reduce the frequency of dispensing. Under the capitation system, Medicaid recipients select a regular pharmacist for services. The pharmacists then receive a monthly capitation fee based on the number of recipients on their rolls, equal to 85% of the estimated per capita costs for drugs & dispensing services

FINDINGS:
Preliminary findings indicate that the pharmacists readily accept the new system of reimbursement. In addition, it is apparent that both the pharmacists and the State of Iowa could significantly reduce administrative costs involved in filing and processing Medicaid drug claims. Finally, the data indicate that the pharmacists did modify their behavior in order to pare ingredient costs.

RECORD NO. HS03305 CATEGORY: COST CONTAINMENT - DRUG STUDIES

TITLE: Improving the Quality of Drug Use in Nursing Homes

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-79	06-30-82	223,347	223,347	620,581

INVESTIGATOR NAME AND ADDRESS

PALUMBO, FRANCIS B
UNIVERSITY OF MARYLAND AT BALTIMORE
525 W REDWOOD ST
BALTIMORE
MARYLAND 21201

OBJECTIVE:
To demonstrate the improvement of drug use in nursing homes and its effect on certain patient outcomes and variables through Drug Use Review (DUR) feedback mechanisms, and educational programs designed for physicians, nurses and patients.

APPROACH:
The study will be carried out in three phases at approximately 35 nursing homes in the Baltimore-Washington area. Criteria will be developed for appropriate geriatric prescribing of a select group of drugs; and protocols will be developed for appropriate patient use of these drugs. With the aid of a computerized DUR system which will be refined, problems with appropriateness of drug prescribing and use will be identified. Then through mechanisms of DUR feedback for physicians, and education of some physicians, nurses and patients, any improvements in drug prescribing or use associated with the program will be delineated. The effects of appropriate and inappropriate drug prescribing and use on patient outcome measures will be recorded. Costs of the DUR feedback study and the patient, nurse, and physician education project will be documented. Finally, these program costs will be related to observed effects of appropriate and inappropriate prescribing and use on patient outcome measures.

FINDINGS:
The study is valuable in that it proposes to demonstrate an approach to the improvement of drug prescribing. Resources will be developed including a computerized drug utilization review system, protocols for geriatric drug prescribing, educational strategies, and reinforcement mechanisms.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03698 CATEGORY: COST CONTAINMENT - DRUG STUDIES

TITLE: Drug Prescribing Quality and Length of Hospital Stay

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
04-01-79	06-30-81	51,104	51,104	51,104

INVESTIGATOR NAME AND ADDRESS

KNAPP, DAVID A
UNIVERSITY OF MARYLAND AT BALTIMORE
525 W REDWOOD ST
BALTIMORE
MARYLAND 21201

OBJECTIVE:
To determine the relationship between drug prescribing quality and improvement in patient outcomes as reflected in length of hospital stay.

APPROACH:
This is a quasi-experimental study involving 4 acute care general hospitals in Baltimore, Maryland. A retrospective review of charts of patients with a diagnosis of pyelonephritis (confirmed by laboratory tests) and without concurrent medical problems is to be made. Three types of explicit prescribing criteria are to be employed to judge the appropriateness of prescribing (cases qualifying for the study, the disease entity, and the appropriateness of a variety of aspects of drug prescribing, including choice of drug, route and dosage, length of therapy, and monitoring of drug effects). Information regarding length of stay; age, sex, and weight; and concurrent use of non-antimicrobial drugs and time of initial drug order are to be obtained. Cases will be categorized as having received appropriate or inappropriate drug therapy. Analyses will be carried out to examine differences between groups in length of stay and other variables, such as severity of illness and source of payment. The generalizability of the findings will be tested by repeating the study on another infectious disease.

FINDINGS:
Since most hospital patients receive drugs and wide variations in prescribing patterns have been reported, improvement in the quality of prescribing could be cost beneficial as well as effective in improving the quality of hospital care. Preliminary work suggests that inappropriate prescribing leads to greater lengths of hospital stay in selected disease states. These early findings, obtained in a pilot study, have important implications for cost containment and quality of care issues.

SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03899 CATEGORY: COST CONTAINMENT - DRUG STUDIES

TITLE: Methods to Improve Quality of Physician Prescribing

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	06-30-83	242,386	242,386	843,262

INVESTIGATOR NAME AND ADDRESS

SCHAFFNER, WILLIAM
VANDERBILT UNIVERSITY

NASHVILLE
TENNESSEE 37240

OBJECTIVE:
To evaluate methods to improve prescribing which educate the prescribing physician. The vehicle for the assessment will be a controlled prospective experiment to ascertain the effectiveness and costs of three education intervention modalities. These interventions are designed to reach those physicians whom earlier studies have identified as inappropriate prescribers.

APPROACH:
Demonstrate and evaluate the content of an educational intervention consisting of nine topics. Each topic focuses upon a small, closely related family of drugs for which there is evidence that a reduction in prescribing is synonymous with improved quality of care. The interventions using these nine topics will be grouped into three cycles of three modules each. Cycle 1 will be confined to specific antibiotics, the indications and contraindications for which are well defined, accepted by authorities and based on reported evidence. Cycle 2 will involve psychotrophic drugs, the indications for which are not precise and for which guidelines are less well known and accepted but which are regarded to be subject to overuse and abuse. Cycle 3 will encompass three different classes of drugs which are the recent subject of either changing indications or controversy; the widely used analgesic propoxyphene, oral hypoglycemics for diabetic children, and phenothiazine antiemetics for children.

FINDINGS:
The proposed study will provide data for policy makers concerning the efficacy, physician acceptance, and costs of alternative techniques to improve prescribing. The information derived from this study is likely to be directly relevant to program planning at both local and federal levels of government. The results should have widespread applicability because techniques are used with topics covering a wide spectrum of therapeutic agents. The patients prescribed for in this study represent those who are often the subject of poor prescribing - the poor, children, the elderly, those who live in rural areas, and subjects who are primarily non-white.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03921 CATEGORY: COST CONTAINMENT - DRUG STUDIES

TITLE: Prescriber Rationale in a Pharmacy Capitation Project

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
08-01-79	10-31-80	33,146	33,146	35,485	HELLING, DENNIS K UNIVERSITY OF IOWA IOWA CITY IOWA 52242

OBJECTIVE:
To explore the dimensions of the relationships between physicians and pharmacists which may help to account for the extreme variations found among the experimental pharmacies in rates of generic substitution of prescriptions for Medicaid patients, and to explore the rationales of physicians for aberrant or questionable prescribing patterns which may be detected as a result of a quality analysis of the prescription data.

APPROACH:
This project will provide an additional analysis of a currently funded study to conduct an analysis of selected beliefs, attitudes, and behavior of the participating pharmacists and physicians in the Iowa Medicaid program. The investigators will use open-ended interviews of both physicians and pharmacists to obtain information on selected beliefs, attitudes, and behavior of the participating pharmacists and of the physicians who wrote the majority of the prescriptions filled by those pharmacists. Both of the two intertwined objectives involve integrating already collected prescription data with data to be obtained from semi-structured, open-ended personal interviews with the pharmacists and physicians. To our knowledge, this will be the first time this technique has been systematically used to explore the rationales of the prescribing patterns of physicians and the views of physicians on the role of the pharmacist in the drug product selection.

FINDINGS:
This supplementary project will obtain information about issues not addressed in the currently funded capitation experiment; namely of understanding pharmacist behavior under altered financial incentives and of understanding physician-pharmacist interaction.

RECORD NO. HS03930 CATEGORY: COST CONTAINMENT - DRUG STUDIES

TITLE: Impact of Capitation on Non-Medicaid Prescriptions

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-80	42,375	42,375	42,375	NORWOOD, GEORGE J UNIVERSITY OF IOWA IOWA CITY IOWA 52242

OBJECTIVE:
To study the rate of generic substitution for non-medicaid prescriptions. It will examine the extent to which changes in pharmacist behavior under capitation may spread to patients who are covered by third party programs or who pay directly for their prescriptions.

APPROACH:
This project will provide an analysis of an additional area of research interest related to a presently funded study (HS 2658) "Capitation for the Iowa Medicaid Drug Program" which examines the impact of an economic incentive to overcome pharmacist resistance to drug product substitution; which effect has been experience in another NCHSR supported study (Goldberg, "Evaluation of Impact of Drug Substitution Legislation," HS 2132). The study will involve a cluster sampling of prescriptions in each pharmacy in the 2 experimental counties as well as the 2 control counties (a total of 22 pharmacies). The time period of analysis is three years: 6 months before, 2 years during and 6 months after the capitation program. The analysis will compare the extent of generic substitution for non-Medicaid prescriptions in terms of percentage and dollar savings between experimental and control pharmacies before during and after the program. The proportion of generic substitutions involving drugs under the MAC regulations will also be analyzed.

FINDINGS:
Data generated by this study will be useful in documenting the spillover effect of the capitation method of reimbursement on non-Medicaid prescriptions covered by third party programs or paid for directly by the purchaser. It represents an important issue with policy implications in as much as preliminary results of the presently funded research by the principal investigator seems to indicate that capitation reimbursement can produce significant cost savings for both the Iowa Medicaid Drug Program and Iowa pharmacists.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03968 CATEGORY: COST CONTAINMENT - DRUG STUDIES

TITLE: Evaluation of Formularies in Quality and Care Control

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-15-79	09-14-80	47,436	47,436	47,436

INVESTIGATOR NAME AND ADDRESS

DANIELS, C
UNIVERSITY OF MINNESOTA OF MNPLS-ST PAUL

MINNEAPOLIS
MINNESOTA 55455

OBJECTIVE:
To examine the concept of formulary restrictiveness--the practice in hospitals of the medical staff's pharmacy and therapeutic committees to evaluate and select drug products for use in the hospital's patient care--to determine its impact on drug prescribing qualities and drug therapy costs.

APPROACH:
The research environment will be 20 to 25 short term general hospitals which, within each, four drug therapeutic class user groups will be identified from a prior 12-month period. From each hospital random samples of 20 patients will be made. Pharmacy and medical records will be the source for dependent measures, interviews will be the source for independent measures. A multiple regression equation utilizing restrictiveness variables and control variables will be developed.

FINDINGS:
This study proposes to demonstrate that drug formularies with the greatest ability to control drug use has the greatest potential for cost control and increasing quality. This study has direct relevance to the NCHSR cost containment priority to study the relative cost-effectiveness of drug prescription practices and utilization, and to proposed legislation that would provide for drug coverage under a National Health Insurance.

RECORD NO. HS03971 CATEGORY: COST CONTAINMENT - DRUG STUDIES

TITLE: Assessing Ambulatory DUR Cost-Effectiveness

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-30-81	24,560	24,560	34,970	TREMBLAY, JACQUES LAVAL UNIVERSITY CITE UNIVERSITAIRE QUEBEC CANADA

OBJECTIVE:
To evaluate the impact of a Drug Utilization Review (DUR) Program on quality and economy of prescribing.

APPROACH:
A quasi experimental design will be utilized in an ambulatory Drug Utilization Review Program in Le Centre hospitalier de l'Universite Laval (CHUL) with Hospital Laval (HL) service as a control. Physician prescribing will be monitored at both institutions with peer review feedback being provided CHUL over the 6 - quarter observation period. In each of the 6 observation periods a random sample of 1,000 prescriptions will be analyzed to assess cost and quality.

FINDINGS:
The study will provide a measure of efficacy for a quality assurance mechanism under quasi experimental conditions and will address cost variation possibly attributed to quality assurance. To the extent this project involves payment under the Canadian Health Insurance System for drugs provided at ambulatory care facilities, it might have decided policy implications for the NCHSR's priority area of health insurance.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS04011 CATEGORY: COST CONTAINMENT - DRUG STUDIES

TITLE: Innovative Behavior of Pharmacies

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-79	06-30-80	32,069	32,069	32,069	DE VITO, CAROLEE A UNIVERSITY OF MIAMI BOX 016159 MIAMI FLORIDA 33101

OBJECTIVE:
To examine the variation in dispensing patterns in pharmacies in two states (Michigan and Wisconsin) that have repealed the antisubstitution provisions of their drug laws, thereby permitting the substitution of generically equivalent drug products.

APPROACH:
Using secondary source data obtained in a study undertaken by the Department of Community Medicine of Wayne State University (comprising 130 pharmacies throughout Michigan and 114 pharmacies throughout Wisconsin) this study will determine the relationship among substitution rates, magnitude of drug variations in the inventory, and pharmacy characteristics.

FINDINGS:
The study is expected to provide information on the extent to which pharmacists adopt generic drug substitution behavior or failed to adopt that behavior. It will examine whether organizational characteristics facilitate adoption or resistance to potentially cost-saving opportunities. Hence, it will contribute to understanding how to effect change through legislation or regulation.

RECORD NO. HS03405 CATEGORY: COST CONTAINMENT - COST CONTAINMENT STRATEGIES

TITLE: Hospital Cost-Containment and County Budget Crisis

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-78	12-31-79	4,567	50,228	50,228

INVESTIGATOR NAME AND ADDRESS

ZUCKER, LYNNE G
UNIVERSITY OF CALIFORNIA LOS ANGELES
405 HILGARD AVE
LOS ANGELES
CALIFORNIA 90024

OBJECTIVE:
To provide health planners with useful information about organizational and interorganizational changes in hospital service delivery and cost containment strategies as a response to the budget constraints brought about by California's constitutional amendment (Proposition 13) to reduce taxes.

APPROACH:
County health department budgets for 58 California counties from the budget period before and after Proposition 13 took effect (July 1, 1978) will be reviewed and compared. Documents from each HSA will be gathered and analyzed. Telephone interviews with county budget personnel will be made where items are not clear or where there are discrepancies in the data. Simple cross tabulation will be prepared to indicate magnitude of Proposition 13 caused budgetary reductions, amount of disturbance initiated among institutions and changes in cost containment strategies.

FINDINGS:
The study is expected to summarize the budget constraints brought about by Proposition 13 including the degree of constraints placed on county supported hospitals among all California counties. It will also identify the planned responses of cost containment in county as well as community hospitals placing emphasis on the reorganization of relations among hospitals for the purpose of cost containment. The study will provide information on actions taken by HSAs in effecting cost containment measures in response to legislated budget constraints.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03447 CATEGORY: COST CONTAINMENT - COST CONTAINMENT STRATEGIES

TITLE: Corporations and the Cost Containment Issue

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-78	03-31-80	0	50,930	54,430	SAPOLSKY, HARVEY M MASSACHUSETTS INSTITUTE OF TECHNOLOGY 77 MASSACHUSETTS AVE CAMBRIDGE MASSACHUSETTS 02139

OBJECTIVE:
To determine if major private corporations are concerned about the rise in health care costs to the point of taking specific cost containment actions.

APPROACH:
Senior level officials and benefit managers from 69 major firms drawn from the Fortune list and from published reports of firms interested in controlling health care costs, were interviewed to determine attitudes and actions of major corporations toward their own health care costs. In addition, insurance executives, government officials, provider association representatives, brokers and union officials were interviewed to round out the investigators knowledge of corporate behavior in cost containment. The interviews were open ended, utilizing a topic guide, and confidential. The firms interviewed employ over 6 million workers are are responsible for the health benefits of 12 million people. Interviews averaged 2 hours per firm but ranged as high as 8 hours. The results of the interviews were summarized and analyzed.

FINDINGS:
Analysis of the interview data indicates that major employers are not especially concerned about health care costs, and see little advantage in taking steps urged by observers to control them. The corporate attitude toward health care cost containment is that health care benefits have already been given away to employees and there is no easy way to take them back. Jeopardizing these benefits would strain employee relations and perhaps lead to unionization. It was also found that few firms want more government controls, even ones intended to control their health care costs, indicating that an alliance between government and industry on this issue does not seem to be at hand.

RECORD NO. HS03485 CATEGORY: COST CONTAINMENT - COST CONTAINMENT STRATEGIES

TITLE: The Effect of Cost Control Incentives in an Independent Practice Association (IPA)

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-78	01-31-80	0	56,408	56,408

INVESTIGATOR NAME AND ADDRESS

BURKETT, GARY L
MEDICAL COLLEGE OF PENNSYLVANIA
3300 HENRY AVE
PHILADELPHIA
PENNSYLVANIA 19129

OBJECTIVE:
To evaluate an IPA type HMO in which the individual physicians are reimbursed on a capitation basis, rather than the usual IPA method of fee-for-service. Both money savings and changes in practice pattern and style will be examined.

APPROACH:
Using existing data, collected by the Health Maintenance Organization of Pennsylvania for financial management and quality assurance purposes, the effects of organizational control incentives will be assessed for their impact on the behavior of physicians who are members of the IPA. Diagnostic specific measures related to the cost control performance of physicians such as hospitalization rates of their patients, specialist referrals, and requests for laboratory tests will be related to organizational cost containment incentives as well as other variables expected to influence physicians cost control performance (e.g., age, training and specialty, mode of practice) using regressional analysis. A small sample of physicians, with extreme positions with respect to their cost control performance, will be interviewed for additional insights concerning their practice.

FINDINGS:
The advantages of prepaid group practice for cost control have been demonstrated. But there is little evidence concerning the performance of IPA type HMOs, most of which are based on fee-for-service reimbursement. This proposal will look at an IPA-HMO which pays the physician by capitation and makes that physician responsible for all specialty referrals as well as all hospital admissions. If this type of IPA succeeds in cost containment, it will broaden the HMO market and draw in more physician participants.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03490 CATEGORY: COST CONTAINMENT - COST CONTAINMENT STRATEGIES

TITLE: Criteria for Selecting HSA Cost Containing Strategies

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-78	05-31-80	0	39,093	39,093	LANNING, JOYCE A UNIVERSITY OF ALABAMA IN BIRMINGHAM UNIVERSITY STA BIRMINGHAM ALABAMA 35294

OBJECTIVE:
To formulate criteria which will serve as a guide to the critical factors that HSAs should take into account as they implement their cost containment objectives.

APPROACH:
The literature of public policy and administration, organization theory, social change theory and health care politics will be subjected to an action-oriented analysis to identify and synthesize concepts relevant to the implementation of cost containment techniques. Each specific cost containment strategy will be evaluated for its impact on the actual and potential institutional arrangements and mechanisms, the environmental relationships, and the decision making processes. This will be used to formulate selection criteria which represent the critical factors that HSA's should take into account in implementing cost containment programs.

FINDINGS:
The study findings is contained in a two volume report of Health Systems Agency cost containment functions under PL 96-641. Volume I identifies, describes, and provides brief bibliographies for eighteen cost containment strategies used in health planning. The volume includes check lists and work sheets developed for use in agency determination of strategies for reducing or overcoming resistance to change. A review of social science literature on policy making, organization theory, planning and social change is reviewed and an attempt is made to apply it to health planning and implementation functions. Volume II contains case studies derived from interviews with personnel of twenty-four Health Systems Agencies.

RECORD NO. HS03508 CATEGORY: COST CONTAINMENT - COST CONTAINMENT STRATEGIES

TITLE: Screening for Cholesterol - Cost and Effectiveness

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-78	01-31-80	0	45,735	45,735

INVESTIGATOR NAME AND ADDRESS

FRAZIER, HOWARD S
HARVARD UNIVERSITY

BOSTON
MASSACHUSETTS 02115

OBJECTIVE:
To quantify the cost and effectiveness of alternative cholesterol screening programs designed to control cardiovascular disease through dietary intervention at an early age.

APPROACH:
Factors identified in an extensive literature review as influencing the cost-effectiveness of dietary programs will be used to develop analytical models of the following three types of hypothetical interventions. Proposal I: Screen all ten-year old children in the U.S. for their cholesterol levels, and intervene with dietary counseling and follow-up on those children with levels above specified limits; Proposal II: Screen U.S. children in families at "high-risk" for premature coronary artery disease, and intervene with dietary counseling and follow-up on those with levels above specified limits; and in Proposal III: Screen no one, but undertake population-wide media and counseling campaigns designed to alter the eating habits of as many people as possible.

FINDINGS:
The product will be a monograph on cost-effectiveness analysis of cholesterol control programs, which will be of value to decision makers and planners who must choose from among preventive programs. This project could also be relevant in predicting cost-effectiveness of strategies and alternatives in other programs of prevention.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03601 CATEGORY: COST CONTAINMENT - COST CONTAINMENT STRATEGIES

TITLE: Medical Costs of Cigarette Smoking

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-81	71,420	71,420	128,895	VOGT, THOMAS M KAISER FOUNDATION RESEARCH INSTITUTE 4610 SE BELMONT ST PORTLAND OREGON 97215

OBJECTIVE:
To estimate the cost differential in providing medical care to cigarette smokers, former smokers, non-smokers and their families to examine the relationship between type of smoking behavior and the utilization of medical services; and study the effects of cessation of smoking.

APPROACH:
The study will examine the relationship between smoking behavior and the utilization of health services over the period 1969-1974. The household Interview Survey, conducted by the Kaiser Health Plan in 1970-1971 and covering 2,502 members will provide information on smoking habits. These data will be linked to inpatient and outpatient records maintained by the plan. Bivariate, multivariate and discriminant analysis will be used to derive estimates of utilization and total costs of medical services for the different study groups.

FINDINGS:
The study will provide new information regarding relative costs of various types of smoking behavior, including cessation and lifelong abstinence from smoking.

RECORD NO. HS03603 CATEGORY: COST CONTAINMENT - COST CONTAINMENT STRATEGIES

TITLE: Competition as a Means to Contain Dental Care Costs

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-79	12-31-80	48,948	48,948	48,948	CONRAD, DOUGLAS A UNIVERSITY OF WASHINGTON SEATTLE WASHINGTON 98195

OBJECTIVE:
To determine the impact of State dental practice acts and professional ethical codes on levels and variations of prices for dental services.

APPROACH:
Based on State dental practice acts and State dental associate ethical codes from 1970, 1971 and 1976, nominal measures will be derived concerning the restrictiveness of such rules with respect to advertising and soliciting of patients, employment and scope of duties of auxiliaries, and the "corporate" practice of dentistry. Data concerning dental services and prices will be gathered from the 1970 National Dental Fee Survey, the 1971 Bureau of Labor Statistics price quotations, and the 1976 Research Triangle Institute survey of dental practices. A multivariate regression model will be developed to test various hypotheses concerning the relationship between legal and ethical restrictions and the level and variations of prices for dental services.

FINDINGS:
Information is expected regarding the mechanics of the dental care market which is less influenced by insurance than other medical markets. Findings from this study will assist regulators, legislators, as well as policymakers concerned with the effect of restrictive practices on dental fees as well as practice patterns.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03634 CATEGORY: COST CONTAINMENT - COST CONTAINMENT STRATEGIES

TITLE: The Benefits and Costs of Anti-Smoking Policies

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-28-79	05-31-81	49,690	49,690	81,556	WARNER, KENNETH E UNIVERSITY OF MICHIGAN ANN ARBOR MICHIGAN 48109

OBJECTIVE:
To analyze the social costs and benefits of anti-smoking policies.

APPROACH:
Estimates will be made on: (1) the nature and amount of the social costs of smoking and of discouraging smoking; (2) the distribution of costs and benefits of smoking across individuals and states with emphasis on the effects of anti-smoking policies on tobacco-producing states; (3) the effects on cigarette consumption of various government policies, such as taxation, media-campaigns, and bans on smoking in public places; and (4) the costs and benefits of specific anti-smoking campaigns. Literature reviews and discussion with authorities in the field will form the basis for further, more intensive exploration of the issues. Multiple regressions, cost/benefit analysis, and sensitivity analysis will be performed. Time series and cross sectional data will come from secondary sources, including the U.S. Dept. of Agriculture and the Tobacco Tax Council. Consumption effects will be linked with health outcomes and economic values to derive total costs and benefits.

FINDINGS:
The results of this work will be useful in the continuing discussion of policy regarding possible initiatives to reduce smoking in that it will spell out the effects of alternative anti-smoking policies, including costs, benefits and impacts on the economies of the tobacco-producing States. Preliminary results indicate that anti-smoking campaigns have, in fact, resulted in a reduction in cigarette consumption.

RECORD NO. HS03738 CATEGORY: COST CONTAINMENT - COST CONTAINMENT STRATEGIES

TITLE: The Potential for Using Taxes to Reduce Smoking

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
08-01-79	08-31-81	28,987	28,987	52,368	LEWIT, EUGENE M COLLEGE OF MEDICINE AND DENTISTRY OF N J 100 BERGEN ST NEWARK NEW JERSEY 07103

OBJECTIVE:
To investigate empirically the impact of differential prices, as represented by differences in State and local cigarette taxes, on the extent of smoking by adults. Particular attention will be given to development of estimates of the price elasticity of demand, i.e. the effect of changes in prices on the number of cigarettes consumed, and the effect of other characteristics, such as health status, age, sex and income.

APPROACH:
The project will estimate the demand for, and consumption of, cigarettes, using data from the Health and Nutrition Examination Survey and the Health Interview Survey, reported by the National Center for Health Statistics, together with price and tax data reported by the Tobacco Tax Council. Multiple regression techniques will be used to estimate demand functions for a sample of States having high taxes (New York, Pennsylvania) and low-tax states (North Carolina). The extent of "smuggling" in responses to high taxes and the effect of higher prices on cessation of smoking will also be studied. In the latter case, smokers will be classified and studied separately by extent and duration of smoking.

FINDINGS:
The project will produce findings relating to the potential effect on cigarette consumption of price increases, specifically relating to the potential usefulness of increases in Excise Taxes on cigarettes as a means of reducing consumption. Other findings will shed light on the question of bootlegging and the effects of decreases in State taxes as they might relate to increases in consumption.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 233793012 CATEGORY: COST CONTAINMENT - COST CONTAINMENT STRATEGIES

TITLE: Case Studies of Health Promotion & Disease Prevention in the Workplace

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	04-30-81	203,460	203,460	203,460	SPARER, GERALD SYSTEM SCIENCES, INC 4340 EAST-WEST HIGHWAY BETHESDA MARYLAND 20014

OBJECTIVE:
To determine the characteristics, content, and target populations of health promotion and disease prevention (HPDP) programs in the workplace; identify and describe selected HPDP programs viewed by sponsors, as successful; determine the process of adoption and implementation; assess the adequacy of available information for cost and benefit analysis, and identify research issues.

APPROACH:
The methods used are: review of published and unpublished literature; identification of HPDP ongoing successful programs in the workplace; consultation with HPDP experts to identify programs not described in literature; site visit ten workplace HPDP programs with richest data for secondary analysis, and analyze data yielded to provide guidance for policy makers in research and HPDP programming.

FINDINGS:
Draft literature review is available but not in analytical mode. Over 150 articles in HPDP identified. Approximately 53 HPDP programs have been briefly profiled and 23 described in some depth.

RECORD NO. 233793014 CATEGORY: DISSEMINATION - DISSEMINATION

TITLE: Synthesis and Dissemination of Research Findings on Distribution and Effectiveness of Health Professions Manpower

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	04-30-81	185,284	185,284	185,284	KIDDER, DAVID ABT ASSOCIATES, INC 55 WHEELER STREET CAMBRIDGE MASSACHUSETTS 02138

OBJECTIVE:
Provide an overview of research on shortages/surpluses of physicians; recruitment and retention of nurses in hospitals; and the effects of professional regulations.

APPROACH:
Review of the literature on each of the subjects, a critical appraisal of the research studies and a synthesis of the findings from these studies that have implications for decision making at the State and local levels. The approach to physicians and nurses is principally from an economic perspective.

FINDINGS:
It is anticipated that the product from this contract will provide a source of information for State and local officials as a basis for policy discussions on these Manpower issues.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 233793016 CATEGORY: DISSEMINATION - DISSEMINATION

TITLE: Synthesis and Dissemination of Research Findings on HMO Operation and Performance

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	01-05-83	275,697	275,697	420,545	MELTZER, ALFRED APPLIED MANAGEMENT SCIENCES INC 962 WAYNE AVENUE SILVER SPRING MARYLAND 20910

OBJECTIVE:
To synthesize extant research findings, expert opinion and descriptive information on the operations and performance of HMOs, and to disseminate such information to key health leaders at the state and local level through the planning and conduct of dissemination workshops.

APPROACH:
A 100-150 page synthesis and a 25 page summary will be prepared on various aspects of HMO operations and performance, including: cost, utilization, quality of care, preventive services, consumer & physician satisfaction, competitive impact, internal organizational factors affecting HMO performance, and external factors affecting HMO performance. A pilot dissemination workshop will be conducted for an audience of key health leaders from the public and private sectors of the health care delivery system to communicate the current state-of-the-art with respect to HMO operations and performance.

FINDINGS:
Expected results of the contract include the preparation and distribution of a synthesis of research findings, expert opinion and descriptive information analyzing and summarizing what is known and what is not known about HMO operations and performance in a manner which focuses research findings and practical experience on the policy issues and operational problems of state and local government health officials and the private sector. Areas in which research and practical experience is weak, limited, contradictory or inconclusive will be identified, along with areas in which further research is required in order to assess the performance and potential impact of HMOs on the health care delivery system and the market for health services. Expected results also include the dissemination of both public and private settings.

SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 233793017 CATEGORY: DISSEMINATION - DISSEMINATION

TITLE: Synthesis and Dissemination of Research Findings on Health Promotion and Disease Prevention Intervention Strategie

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	01-31-81	189,589	189,589	189,589	DANE, J K POLICY RESEARCH, INC 2500 NORTH CHARLES STREET BALTIMORE MARYLAND 21218

OBJECTIVE:
To synthesize extant research findings, expert opinion and descriptive information on intervention strategies and ongoing programs designed to promote health and prevent disease through the modification of lifestyle behaviors; to disseminate such synthesized information to key health leaders at the state and local level through the planning and conduct of dissemination workshops.

APPROACH:
A 100-150 page synthesis and a 25 page summary will be prepared on various intervention strategies and ongoing programs designed to modify lifestyle behavior in the following areas: physical activity; nutrition and dietary patterns; substance abuse (i.e., cigarette smoking, inappropriate use of alcohol and misuse of licit drugs); and other health influencing behaviors (e.g., patient compliance, stress, hypertension and non-use of safety devices). A pilot dissemination workshop will be conducted for an audience of approximately 40 key health leaders from the public and private sectors of the health care delivery system at the state and local level, designed to communicate the current state-of-the-art with respect to available strategies, ongoing programs and their impact, costs and effectiveness.

FINDINGS:
Expected results of the contract include the preparation and distribution of a synthesis of current knowledge and experience relating to the modification of lifestyle behaviors in a manner which focuses findings and information on the policy issues and operational problems of state and local health leaders. Areas in which research and practical experience is weak, limited, contradictory or inconclusive will be identified, along with areas in which further research is required in order to assess the cost and effectiveness of such strategies and programs. Expected results also include the dissemination of current information and finding to audiences of state and local government officials and private sector representatives through the planning and conduct of dissemination workshops.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 233793018 CATEGORY: DISSEMINATION - DISSEMINATION

TITLE: Synthesis & Dissemination of Health Services Research Findings for State and Municipal Health Leaders

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	04-30-81	350,787	350,787	482,310	LEWIN, LAWRENCE S LEWIN AND ASSOCIATES, INC 470 L'ENFANT PLAZA SW WASHINGTON DISTRICT OF COLUMBIA 20024

OBJECTIVE:
To identify and describe key policy issues and operational problems in the States of Florida, Illinois, and Michigan through direct interaction with key health leaders in those jurisdictions; to prepare syntheses on identified issues and problems; and to disseminate synthesized information through the planning and conduct of dissemination workshops.

APPROACH:
Approach encompasses the identification of key health leaders in the three jurisdictions selected; the conduct of meetings and interviews with key health leaders to determine and describe priority health services policy issues and operational problems; the preparation of syntheses of extant research findings, expert opinion and descriptive information on 3-5 identified issues and problems; and the planning and conduct of dissemination workshops to transmit synthesized information through the planning and conduct of dissemination workshops.

FINDINGS:
Expected results of the contract include the preparation and distribution of syntheses of research findings, expert opinion and descriptive information on priority health policy issues and operational problems identified by key health leaders in Florida, Illinois and Michigan. Areas in which research and descriptive information is weak, limited, contradictory or inconclusive will be identified, along with areas of future research. Expected results also include the conduct of dissemination workshops for key health leaders in the jurisdictions selected.

RECORD NO. 233793023 CATEGORY: DISSEMINATION - DISSEMINATION

TITLE: Maintain & Update NCHSR Mailing Keys

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	09-29-80	38,004	38,004	38,004

INVESTIGATOR NAME AND ADDRESS

JOHNSON, RODNEY
AUTOMATED BUSINESS SERVICES, INC
6525 BELCREST ROAD
HYATTSVILLE
MARYLAND 20782

OBJECTIVE:
To maintain, update and expand standard NCHSR mailing keys used for the dissemination of announcements, reports, solicitation, etc. To develop, maintain and expand a set of specialized mailing keys for state and local government officials and private health care sector representatives to be used for the dissemination of various NCHSR announcements and reports.

APPROACH:
Standard NCHSR mailing keys are maintained through the existing computerized system; specialized keys are developed and maintained through establishment of a special computerized systems of keys and coding of types of entries.

FINDINGS:
Expected results encompass the timely and effective distribution of all NCHSR announcements, publications, solicitations, etc. to over 8,000 individuals and organizations included in the standard set of mailing keys, and the timely and effective distribution of such materials to a special set of computerized mailing keys for state and local government officials and private health care sector officials and institutions.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 233793025 CATEGORY: DISSEMINATION - DISSEMINATION

TITLE: Synthesis & Dissemination of Health Services Research for State and Local Health Leaders

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	12-30-80	309,350	309,350	309,350	KLEIN, SUSAN WESTERN INTERSTATE COMM FOR HIGHER ED P.O. DRAWER P BOULDER COLORADO 80302

OBJECTIVE:
To identify and describe key policy issues and operational problems in the States of Colorado and Wyoming, and the municipality of Denver through direct interaction with key health leaders in those jurisdictions; to prepare syntheses on identified issues and problems; and to disseminate synthesized information through the planning and conduct of dissemination workshops.

APPROACH:
Approach encompasses the identification of key health leaders in the jurisdictions selected; the conduct of meetings and interviews with key health leaders to determine and describe priority health services policy issues and operational problems; the preparation of syntheses of extant research findings, expert opinion and descriptive information on 3-5 identified issues and problems; and the planning and conduct of dissemination workshops to transmit synthesized information to key health leaders in Denver, Colorado and Wyoming.

FINDINGS:
Expected results of the contract include the preparation and distribution of syntheses of research findings, expert opinion and descriptive information on priority health policy issues and operational problems identified by key health leaders in Denver, Colorado and Wyoming. Areas in which research and descriptive information is weak, limited, contradictory, or inconclusive will be identified, along with areas of future research. Expected results also include the conduct of dissemination workshops for key health leaders in the jurisdictions selected.

RECORD NO. HS01833 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Analysis and Therapy of Life-Threatening Emergencies

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-30-76	06-29-81	161,768	513,487	708,764

INVESTIGATOR NAME AND ADDRESS

SHOEMAKER, WILLIAM C
LOS ANGELES COUNTY HARBOR-UCLA MED CTR
1000 W CARSON ST
TORRANCE
CALIFORNIA 90509

OBJECTIVE:
To continue the development and evaluation of a set of protocols to manage severe medical emergencies, and to test the protocols through controlled clinical trials.

APPROACH:
The investigators have designed a general algorithm to be used with patients who arrive at an Emergency Department with potentially life-threatening problems. They are testing the algorithm in one of three emergency services, the other two serving as comparison groups, and are examining differences in mortality, resuscitation time, admission and number of days in the Intensive Care Unit, need for ventilatory support, number of secondary operations and of complications, febrile days, and time in hospital. Further studies include formulation and testing of an algorithm for Intensive Care Units, and completion of the clinical trials in an operational setting, as well as refinement and validation of a Predictive Index to estimate survival probabilities.

FINDINGS:
Patients treated in accordance with the Emergency Department protocol are resuscitated more promptly than those managed by conventional means. The algorithm has gained enthusiastic acceptance from physicians at the research site, and has provoked widespread interest in other hospitals. The systematic development and validation of clear and precise methods for diagnosing and managing critical medical emergencies is a central activity in emergency medical services research, not only because of the significant improvements which effective algorithms can provide in clinical care but also for their value as tools for education, evaluation, and cost analysis.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02068 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Myocardial Infarction Prediction in Emergency Rooms

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-30-76	12-31-81	654,470	1,396,838	1,725,983	POZEN, MICHAEL W BOSTON CITY HOSPITAL 818 HARRISON AVENUE BOSTON MASSACHUSETTS 02118

OBJECTIVE:
To test the validity, reliability and utility of a mathematical model to predict acute ischemic heart disease in individual patients in six hospitals throughout New England in an effort to reduce inappropriate admissions to Coronary Care Units.

APPROACH:
The six hospitals, though randomly selected, represent major academic, teaching affiliates, and non-teaching institutions which care for all socio-economic groups. During the prospective phase of the study, the predictive function will be given to ER physicians to supplement their diagnostic and admission decisions. For one hospital group, the ER physicians will use the model on every eligible patient during the first six months of the study and have it withheld the last six months. For the second hospital group, the model will be given to the ER physician during the alternate months. The predictive function is based on the physician's present intuitive approach involving the weighting of all relevant variables in reaching a diagnosis. This additional diagnostic tool is intended to improve Coronary Care unit admitting practices. Generalizability will be demonstrated at six hospitals with varying characteristics, divergent physician practices, and different population characteristics.

FINDINGS:
Findings from the Boston City Hospital ER indicate that the use of the tool improved diagnostic accuracy by 12% and reduced the false positive CCU admission rate by 40%. Every patient admitted to a General medical ward rather than a CCU bed resulted in a gross savings of $293 per patient day which could be attributed to the use of this predictive instrument. The difference in per diem costs between CCUs and acute care beds are substantial. Even a modest improvement in diagnostic accuracy would yield large cost savings in addition to savings in both physical and psychological side effects suffered by patients. If there are differences between the ER performance when the model is available in the ER versus when it is not, analysis of the prospective study data should detect these differences with a very high probability.

RECORD NO. HS02102 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Confirmation Parameters to Assess EMT's Decisions

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-77	02-28-80	22,118	255,588	255,588

INVESTIGATOR NAME AND ADDRESS

POZEN, MICHAEL W
BOSTON CITY HOSPITAL
818 HARRISON AVE
BOSTON
MASSACHUSETTS 02118

OBJECTIVE:
To assess the utility of proximate patient outcome parameters for confirming the effectiveness of the pre-hospital diagnostic and therapeutic abilities of EMT's and paramedics.

APPROACH:
The method focuses on the development of intermediate outcome measures called "proximate confirmation parameters". These are diagnostic and/or physiological measurements obtained in the emergency room (ER) by which the level of EMT and paramedic (EMT/P) pre-hospital care will be judged. Proximal confirmation parameters were developed for three specific conditions in ascending order of methodological complexity for which EMT interventions exist: peripheral fractures, cardiac arrests and chest and abdominal traumas. As a result of the reorganization of the Boston City EMS system during the final year of the study, data collection was expanded to three-additional hospital ERs; Carney Hospital, Massachusetts General and Tufts New England Medical Center. Three study populations comprised of 225 pre-hospital patients with suspected peripheral fractures, 286 with cardiac arrest and 140 with suspected chest or abdominal trauma cared for by Emergency Medical Technicians (EMT's) or paramedics during a 2 year period were studied.

FINDINGS:
For patients treated by EMT's and paramedics with suspected fractures the percentage of correct diagnoses and splinting skills demonstrated that 54% (121) of the patients were misdiagnosed as having fractures. 7% of the fracture cases were missed. These occurred in patients under 36 years of age and predominantly white males. Splinting was inadequate in 23% of the cases and malrotation occurred in 10 of 24 patients. EMT's and paramedics over time tend to overdiagnose patients with suspected fractures. Length of experience or caseload did not improve EMT or paramedic performance. Arterial blood gases were analyzed to assess pre-hospital CPR and were incompatible with survivorship in 53% of the cases. The measures predicting survival include: increased oxygen blood saturation; an initial viable ECG rhythm; less than 5 minutes from arrest to CPR; and less than 15 minutes from CPR to definitive care. Care of patients with abdominal/chest trauma demonstrated that patients with unstable hemodynamics who did not receive intravenous fluids remained unstable in the Emergency Room.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02118 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: A Critical Examination of the Illinois Trauma System

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-30-76	06-30-80	0	247,100	247,100

INVESTIGATOR NAME AND ADDRESS

GELFAND, HENRY M
UNIVERSITY OF ILLINOIS MEDICAL CENTER
BOX 6998. 1737 W POLK ST
CHICAGO
ILLINOIS 60612

OBJECTIVE:
To evaluate the effectiveness of the Trauma Center Program (50 hospitals designated as Trauma Centers) in the State of Illinois.

APPROACH:
Completeness, reliability, and validity of Trauma Registry data will be assessed. The project will identify the percentage of trauma patients treated at non-Center hospitals as compared with designated Trauma Centers. Comparisons will be made of the two sets of patients with regard to medical status, disability, duration of hospitalization, satisfaction, and cost. Data collection activities include surveys, data validation, and case studies.

FINDINGS:
The findings of this study indicate that approximately 46.6% of all trauma patients were hospitalized at Trauma Centers. A high proportion of non-whites (69.0%), individuals injured in vehicular accidents (51.7%), ambulance arrivals (50.9%), transfers (66.3%) and those admitted to Intensive Care Units (68.4%), were hospitalized at Trauma Centers. The evaluation of the ITR found it to be only 36% complete; case inclusion in the registry was systematically biased toward the more severe injuries. A mail survey was developed to ascertain the post-hospital health status of trauma victims. Difficulties relating to patient confidentiality and low response rates (24%) suggest serious limitations with this procedure. An index of injury severity (the Estimated Survival Probability or ESP index) was developed based entirely on the diagnostic information listed on the face sheet of the medical record. The ESP index correlates well with both survival and length of hospitalization. Because of its limited data requirements, the ESP index should prove valuable in future studies of traumatic injuries.

RECORD NO. HS02149 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Validation of Quality Assessment Measures in EMS

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-01-76	04-30-82	68,200	691,376	1,084,945

INVESTIGATOR NAME AND ADDRESS

FRAZIER, WILLIAM H
YALE UNIVERSITY
L55 WHITNEY AVENUE
NEW HAVEN
CONNECTICUT 06520

OBJECTIVE:
To develop and test a system of quality appraisal for care in the Emergency Department (ED).

APPROACH:
This project will produce a set of clinical algorithms, for soft-tissue lacerations, burns, upper- and lower-extremity injuries, and soft-tissue infections. The algorithms are backed by a system of feedback to physicians of information on their deviations from the algorithms. An experimental test of one algorithm has shown substantial impact on performance of house staff. The four additional algorithms will be subjected to similar tests, and varying feedback intervals will also be tested to determine the most efficient. The result will be a system capable of improving quality of care for 30 percent of ED patients (80 percent of surgical ED patients).

FINDINGS:
The soft-tissue laceration algorithm with feedback to physicians within 48 hours, of information on deviations, produced significant and large improvements in quality of care as compared with randomly assigned controls with the algorithms but no feedback. When feedback was discontinued, degradation in performance was relatively slight, indicating a learning effect.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02418 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Clinical Algorithms for EMT Performance Assessment

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-30-76	03-31-80	0	600,675	600,675	CAYTEN, C GENE UNIVERSITY OF PENNSYLVANIA PHILADELPHIA PENNSYLVANIA 19174

OBJECTIVE:
To provide a mechanism for evaluating and upgrading the performance of Emergency Medical Technicians and thereby to improve the quality of pre-hospital care for victims of emergency illness and accidents.

APPROACH:
Clinical algorithms are developed for EMT's that help them determine the appropriate action to take and provide standards for assessment of quality of care. Use of the algorithms in EMT practice will be evaluated for compliance and effect on case outcomes.

FINDINGS:
The development of standardized emergency procedures leading to improved patient outcomes would have important implications for the emergency medical service systems throughout the country.

RECORD NO. HS02467 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Assessing Emergency Systems Quality: Method Development

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-30-76	12-31-81	203,792	504,172	969,995

INVESTIGATOR NAME AND ADDRESS

GREENFIELD, SHELDON
UNIVERSITY OF CALIFORNIA LOS ANGELES
405 HILGARD AVE
LOS ANGELES
CALIFORNIA 90024

OBJECTIVE:
To demonstrate the generalizability of the "criteria mapping" approach to quality of care assessment for two common complaints presenting to the emergency room, chest pain and abdominal pain; and to develop this method into an exportable package which can be used in any emergency department to identify charts for physician audit which are likely to indicate deficiencies in quality of care.

APPROACH:
A criteria map is a method for abstracting and interpreting information in the medical record on presenting complaints and associated findings to arrive at subgroups of patients with similar characteristics. In this application, it calculates the level of risk of serious disease warranting hospital admission. This research entails testing the generalizability of a chest pain criteria map, developed and tested in two hospitals, to a third hospital with a different physician and patient population; determining health outcomes of patients to assess the validity of the method in this new setting; assessing the ease of abstraction by the hospital's own abstractors; comparing the efficiency of physician review of quality with and without the map score as a screen; developing and testing a criteria map for abdominal pain; and developing a package, including a computerized scoring system, for dissemination of the method to any emergency department.

FINDINGS:
Statistical analysis of the chest pain criteria map has resulted in modifications of the map and the scoring system to increase its validity and efficiency and its simplicity. The criteria map score has been shown to be a strong predictor of the patient outcome of admissible disease. The map performs less well in discriminating among admitted patients with and without admissible disease than it does among discharged patients. However, outcome indicators for admitted patients have been revised from discharge diagnosis to procedural information and this has improved the correlation of outcome with map scores. Use of the chest pain criteria map has been replicated at a community hospital with a different patient and physician population than the two hospitals in which the map was developed. Preliminary results confirm previous findings. The relationship of process to outcome is stronger than it was in the initial two hospitals, for admitted patients, but somewhat less striking for discharged patients. This research has also shown that quality scores based on criteria lists are negatively correlated with outcomes for chest pain in the emergency room setting.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02538 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Hospital Emergency Services

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-30-76	08-31-80	97,733	608,262	608,262	GEORGOPOULOS, BASIL S UNIVERSITY OF MICHIGAN ANN ARBOR MICHIGAN 48109

OBJECTIVE:
To describe the organization and assess the effectiveness of emergency care units.

APPROACH:
This comparative study of a probability sample of 45 hospital emergency services in the Upper Midwest will examine efficiency, quality of service, responsiveness to community expectations, and staff and patient satisfaction. Data will be collected by interviews, observation and examination of records.

FINDINGS:
This study should increase the understanding of the relationship between the organization and operation of an emergency medical service and the effectiveness of such units.

RECORD NO. HS02559 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Quantitation of Injury and Critical Illness

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-30-76	12-31-80	89,788	541,107	590,933

INVESTIGATOR NAME AND ADDRESS

CHAMPION, HOWARD R
WASHINGTON HOSPITAL CENTER
110 IRVING ST NW
WASHINGTON
DISTRICT OF COLUMBIA 20010

OBJECTIVE:
To describe the severity of a patient's injury in quantitative terms as a function of various anatomical and pathophysiological state and to correlate estimated severity with outcome.

APPROACH:
Injury as a disease comprises a wide spectrum, from very minor to instantaneously lethal. This research refines earlier efforts toward establishing a numerical index of severity of injury that correlates with patient status and outcome. Three indices that are independently and collectively predictive of patient status will be tested and refined.

FINDINGS:
Trauma is the major caûse of death up to age 37, and is a major cost factor in delivering emergency health care. Accurate quantitative means of judging a trauma patient's status and guiding care could both help improve emergency care decision making and serve as a basis for better evaluation of services.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02567 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Complications in Prehospital Cardiac Resuscitation

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-77	11-30-80	158,058	558,215	558,215	NAGEL, EUGENE L JOHNS HOPKINS UNIVERSITY CHARLES AND 34TH STS BALTIMORE MARYLAND 21218

OBJECTIVE:
This study will attempt to identify complications of prehospital administration of cardiopulmonary resuscitation (CPR) and observe associated factors.

APPROACH:
With the cooperation of the Miami EMS system and medical examiner, out-of-hospital incidents of CPR administration are identified. Medical examination of nonsurvivors, and hospital records and interviews of survivors are used to identify adverse consequences of the intervention and characteristics of the victim (e.g., age, body weight). Ambulance records and rescuer interviews will be used to determine relevant circumstances of the incident and characteristics of the rescuer.

FINDINGS:
Preliminary results suggest high frequencies of fractured ribs and aspiration pneumonitis. Indications will be sought for improvements in the technique or the training of rescuers in its use.

RECORD NO. HS02621 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: EMS Severity Index Research

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-77	05-31-80	0	400,189	412,317

INVESTIGATOR NAME AND ADDRESS

GUSTAFSON, DAVID H
UNIVERSITY OF WISCONSIN MADISON
500 LINCOLN DR
MADISON
WISCONSIN 53706

OBJECTIVE:
The purpose of this research is to develop and test two severity index measures.

APPROACH:
The investigators will develop and test two methods of constructing scales of severity of conditions: one based upon subjective judgments of severity, the other, upon statistical analysis. The two methods will be tested on two "tracer" conditions, such as trauma and heart attacks.

FINDINGS:
Severity measures are essential in comparing the performance of EMS systems that define the severity of the cases they treat. These two methods, tested for reliability and acceptability, could be used for such comparisons.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02702 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Measurement of EMT Performance

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-77	06-30-80	6,877	333,667	361,250	SECHREST, LEE B FLORIDA STATE UNIVERSITY TALLAHASSEE FLORIDA 32306

OBJECTIVE:
To develop a method for assessing the performance of emergency medical technicians and paramedics.

APPROACH:
The project staff will collect data on the decisions and treatments of emergency medical technicians and paramedics in urban and rural areas. A series of proficiency tests will be used to evaluate the general level of performance. The validity of the performance assessment will be evaluated by comparison with outcomes and other accepted proficiency tests.

FINDINGS:
The assessment of performance of these workers will provide some indicator of what training should be provided, what types of individuals should be trained, and what degree of experience is critical for a defined level of care.

RECORD NO. HS02902 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: A Computerized Evaluation Model for EMS Performance

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-01-77	02-28-80	0	525,000	525,000

INVESTIGATOR NAME AND ADDRESS

WOLFE, HARVEY
UNIVERSITY OF PITTSBURGH
4200 5TH AVE
PITTSBURGH
PENNSYLVANIA 15260

OBJECTIVE:
To develop an effective and economically feasible method for using ongoing data collection systems to monitor the performance of individual elements of an EMS system, to provide feedback information to providers based on the evaluation, and to assess the impact of this feedback on changes in performance.

APPROACH:
Building on a uniform data collection system used by 58 ambulance companies providing 75,000 trips per year in and around Pittsburgh, a computerized screening model will be developed to identify cases deviating from normal care patterns. Care protocols will be developed and validated by panels of physicians. Cases will be evaluated along three parameters: severity of illness/injury; treatment risk; and quality of care provided.

FINDINGS:
If this system proves to be cost effective, it will be important for identifying areas of deficient performance and for planning refresher training and recertification programs.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03058 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Health Status of Survivors from Cardiac Arrest

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-78	09-30-81	75,000	174,650	259,787

INVESTIGATOR NAME AND ADDRESS

BERGNER, LAWRENCE
SEATTLE-KING COUNTY HEALTH DEPARTMENT
612 3RD AVE
SEATTLE
WASHINGTON 98104

OBJECTIVE:
To determine the health status-physical and psychosocial- of survivors of out-of-hospital cardiac arrest using the Sickness Impact Profile (SIP) and other measures of dysfunction.

APPROACH:
Survivors of cardiac arrest in Seattle and King County are interviewed six months after discharge to determine their health status. Their SIP scores are compared with those of a group of normal patients and with a group of myocardial infarct patients who did not suffer an arrest. Comparisons within groups are also made to identify factors in treatment which may affect health status.

FINDINGS:
Pilot work suggested differences in health status following cardiac arrest depending upon whether prehospital care is given by basic technicians or by paramedics, whether resuscitation is begun immediately or is delayed, and the duration of cardiopulmonary resuscitation prior to the provision of definitive care. Preliminary findings from the current study suggest that cardiac arrest patients who survive for six months after discharge recover to reasonably high levels of health, though not as high as myocardial infarction patients who did not suffer an arrest. Further analysis will address the effect of type of treatment and time factors. The information will contribute to understanding the long-term cost-effectiveness of sophisticated prehospital cardiac care.

RECORD NO. HS03090 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Severity Index Construction: Methods, EMS Applications

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-01-79	04-30-82	114,277	114,277	349,597	KRISCHER, JEFFREY P UNIVERSITY OF FLORIDA GAINESVILLE FLORIDA 32611

OBJECTIVE:
To develop analytic methodologies for the construction of severity indices consistent with clinical judgements.

APPROACH:
Decision theory, utility theory, and modeling of clinician's judgement will be used to construct indices of the severity of burns and trauma and of the need for care. The development of the indices includes: defining attributes to be included in each index; testing the assumptions of the independence of attributes; assessing the relative weights of the attributes; assessing severity functions of each attribute; and modeling by combining the importance of each attribute and severity function into a single index. These indices will then be tested using the Florida Trauma Registry.

FINDINGS:
The expected findings are methodological advances in index construction along with two or three indices of severity relating to trauma, burns, and immediacy of care. Such work is pertinent to legislation and evaluation of Emergency Medical Services and should be useful in evaluating the adequacy, timeliness, and impact of medical services.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03094 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Evaluation of An EMS Algorithm System

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-78	06-30-80	3,834	28,968	30,068	PODGORNY, GEORGE AMERICAN COLLEGE OF EMERGENCY PHYSICIANS LANSING MICHIGAN 48906

OBJECTIVE:
To identify, evaluate, and field test protocols and algorithms appropriate to emergency medical care, to test a method of evaluating such algorithms in terms of medical logic and functional feasibility, and to derive some general rules for protocol and algorithm development.

APPROACH:
A library of algorithms was assembled from many medical sources. These algorithms were screened for relevance to emergency care by a panel of physicians from the American College of Emergency Physicians (ACEP). Those algorithms judged unrelated to emergency care and those judged acceptable in all respects without further testing were to be set aside for inclusion in the final report. Of the remaining algorithms, up to twelve which have questionable medical content were to be field-tested at sites where emergency medicine residencies had been endorsed by the ACEP.

FINDINGS:
Errors in administration and instrument design led to uninterpretable or incomplete results.

RECORD NO. HS03215 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Treating Cardiac Arrests with Defibrillation by EMT's

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
04-01-78	03-31-81	78,586	172,140	200,205

INVESTIGATOR NAME AND ADDRESS

BERGNER, LAWRENCE
SEATTLE-KING COUNTY HEALTH DEPARTMENT
612 3RD AVE
SEATTLE
WASHINGTON 98104

OBJECTIVE:
To determine the effectiveness of prompt defibrillation, performed by Emergency Medical Technicians (EMTs), in improving survival rates for out-of-hospital cardiac arrest patients.

APPROACH:
This project takes advantage of a natural experiment in King County, Washington, where an Advanced Life Support system is being introduced in phases. A comparison will be possible of the experience of areas served by EMTs, by EMTs trained and certified in the use of defibrillators (EMT/DC), and by paramedics (EMTs extensively trained in advanced cardiac techniques such as intubation and medications, as well as defibrillation). A surveillance system has been established to identify all out-of-hospital cardiac arrest patients who receive emergency care and the outcome (death, hospital admission, long-term survival) is determined for each patient. The effectiveness of EMT/DC services is compared with the results of basic EMT service, and with paramedic results. The value of a tiered system in which EMT/DCs supplement paramedic services is also being examined.

FINDINGS:
Preliminary findings suggest that, as compared to conventional EMTs, EMT/DC services double the rate of survival to hospital discharge for cases of cardiac arrest due to primary heart disease; this comes close to the rates achieved by paramedics. If these results are borne out, it will be possible to recommend EMT-performed defibrillation as an alternative or a supplement to the much more costly paramedic program for improving prehospital cardiac care. This system design would particularly aid rural and remote EMS systems containing communities with low population densities and limited budgets.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03237 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Measuring the Quality of Survival in Burn Patients

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-01-79	09-30-80	43,823	43,823	43,823	MUNSTER, ANDREW M BALTIMORE CITY HOSPITALS 4940 EASTERN AVE BALTIMORE MARYLAND 21224

OBJECTIVE:
To develop a reliable and valid burn outcome scale to measure the quality of life in surviving burn patients. This burn outcome scale may be used to compare patient outcomes in different burn centers; as a prognostic indicator for clinical purposes; and to compare burn centers with general hospital facilities. This information will be invaluable for planning a national strategy of burn care and supporting the development of Regional Burn Centers as mandated by Federal legislative action in 1976.

APPROACH:
Items were first developed and weighted using burn-relevant questions from existing scales, and adding burn-specific questions gathered through local patients and a consultant group. After the scale was developed, a small group of patients (about 30) discharged 1 to 3 months previously, was monitored to yield information about logistics, patient fatigue and distress, time involved, etc. This information was interpreted as pilot data for a subsequent major longitudinal effort.

FINDINGS:
Present understanding of burn outcomes is limited almost exclusively to mortality although evidence suggests that the value of specialized burn care may be more evident in differences among survivors of burns, such as more complete restoration of joint function, improved appearance, better social adjustment, etc. Further investigation, as specified above for a longitudinal study, is required.

RECORD NO. HS03239 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Quality of Care in Acute Myocardial Infarction

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-01-79	01-31-82	121,661	121,661	275,466	TUGWELL, PETER MC MASTER UNIVERSITY HAMILTON CANADA

OBJECTIVE:
To develop methods and a strategy for validating the medical care process in myocardial infarction against both clinical and functional health outcomes.

APPROACH:
This study is designed as a prospective analytic survey, in which patients with acute myocardial infarction (rigorously defined) are to be followed during the course of their hospitalization and for six months following discharge. Measurement instruments have been developed and a pretest of 44 patients has been conducted, and initial analyses performed. Plans for entering control variables into the analysis are to be developed and further specific analyses are to be performed on the pretest. Approximately 200 patients admitted consecutively to intensive care units of three community hospitals will then be studied, utilizing a nurse observer for recording components of the process of their care. Process data will then be compared with clinical and functional outcomes of the patients.

FINDINGS:
This research is expected to identify the processes of cardiac care which are sufficiently associated with clinical outcomes to warrant controlled clinical trials in later studies. In addition, measurement tools for gathering valid data on care process are being developed. These will improve our ability to measure the effect of the EMS system upon ultimate survival and degree of recovery.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03245 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Assessing Alternative EMS System Improvements

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-78	02-29-80	0	37,582	37,582	HONEY, REX D UNIVERSITY OF IOWA IOWA CITY IOWA 52242

OBJECTIVE:
To determine the availability of emergency medical services in the Southeast Iowa Emergency Medical Services (EMS) Region, to explain the distributions of services and to develop a mathematical model for evaluating alternative distributions of the services.

APPROACH:
Data concerning the availability of services (geographic location, accessibility, and quality) will be organized by Census Enumeration District (CD) and will pertain to eleven service components of an EMS system (manpower, training, communication, transportation, emergency rooms, access, critical care, transfers, recordkeeping, mutual aid agreements, and review and evaluation). Areas deficient in one or more components will be identified using that data. A comparison of deficient areas with areas not deficient will be made in terms of socio-economic, occupational and governmental characteristics. The proposed mathematic model (called the Appropriateness Index) will include factors such as population service components, standards and associated costs for services, and relative importance weights of components as expressed by Regional and State EMS planners and local providers. Various distributions of components will be assessed using the model in order to maximize the total number of people being served by service components which meet minimum standards.

FINDINGS:
The study suggests methods for assessing EMS alternatives. Some of the suggestions are: that the assessing of alternative EMS improvements is possible through a flexible and accurate procedure; that the locations of demand and supply points can be determined in a geographic information system which permits the estimation of the time required to deliver services throughout the region; that the availability of elements of an EMS system within the region can be determined and structured into a data matrix; and that alternative improvements in an EMS system can be determined through an equation, using relative weights of EMS elements as well as a budget constraint, which calls for improvements for the maximum number of people.

TITLE: Burn Care Facility Study

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
04-01-79	07-31-81	380,315	380,315	682,362

INVESTIGATOR NAME AND ADDRESS

PAYNE, BEVERLY C
UNIVERSITY OF MICHIGAN

ANN ARBOR
MICHIGAN 48109

OBJECTIVE:
To develop methods to determine the cost effectiveness of special care facilities for burn patients.

APPROACH:
Measures of patient characteristics, architectural and organizational factors, quality of care, and costs of treatment are being tested for subsequent incorporation in a full-scale examination of patient care in different critical-care units, and in comparisons between specialized facilities and general hospital wards. The initial project is studying approximately 1,000 patients in ten hospitals, three with specialized burn care facilities, four with dedicated beds, and three with general care beds. Instruments are being developed to collect data on five major types of variables: 1) patient outcomes; 2) patient prognostic indicators; 3) treatment variables; 4) organizational variables; and 5) costs. Data will be used in methodologic analyses and preliminary explorations of hypothesized relationships, to permit the development of a design for a definitive study.

FINDINGS:
The costs of care in specialized facilities are considerably greater than in general hospital beds. There is an immediate need to determine which of the factors associated with these higher costs, if any, are associated with improved patient care before a planned program to establish burn care centers is undertaken. The study will develop methods for a larger study and determine the amount of outcome variation that may be related to institutional factors, in order to determine the desirability of such a study. It is also important to establish that the variance in outcome between institutions is not entirely explainable by patient factors such as severity of the burn.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03404 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Cost Effectiveness of Community Health Centers

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-78	07-31-80	0	36,850	36,850	PLASKA, MARY NATIONAL ASSN OF COMMUNITY HEALTH CTRS 1625 I ST NW, STE 420 WASHINGTON DISTRICT OF COLUMBIA 20006

OBJECTIVE:
To synthesize existing research concerning the cost-effectiveness of Community Health Centers (CHC), to develop a research design for use in evaluating the cost-effectiveness of local CHCs, and to publish and disseminate the synthesis and evaluation design to State Health Planning and Development Agencies (SHPDAS) and Health Systems Agencies (HSAs).

APPROACH:
During the process of synthesizing research on cost-effectiveness of CHCs, the investigator will also summarize the research design of each study. A list will be compiled of relevant design issues such as demographic and socio-economic variables useful in describing CHC clients versus non-clients; definitions and measurement techniques for costs, utilization, morbidity, mortality and access; sampling methods; and potential cost and client data sources. The design summaries and issues list will be submitted to a panel of experts for additions, review and comment. Using the summaries and reviews, the principal investigator in consultation with the panel will draft one design. The draft will be reviewed by several parties including NCHSR. The research synthesis and final design will be published and distributed.

FINDINGS:
The project will provide a cost-effectiveness research design suitable for use by the local and regional health planning agencies in evaluating CHCs as mandated in P.L. 93-641. The synthesis of current research will provide a reference for evaluations in other contexts.

TITLE: Reliability and Validity Testing of the AIS and ISS

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	06-30-81	124,252	124,252	205,181	SHAPIRO, SAM JOHNS HOPKINS UNIVERSITY CHARLES AND 34TH STS BALTIMORE MARYLAND 21218

OBJECTIVE:
To test the reliability and validity of scales which are being used to classify severity of injury for trauma patients.

APPROACH:
The Abbreviated Injury Scale (AIS) and the Injury Severity Scale (ISS) are two of the methods used in classifying the severity of the injuries to patients. They have been used to permit comparisons of different methods of treatment, different facilities, and different systems of care. This study will determine the reliability of scores calculated by physicians, nurses, and medical technicians. It will explore differences when scores are calculated from Emergency Department forms, hospital charts, or discharge diagnoses, and when records from different hospitals are used. It will also assess whether scores calculated for non-vehicular injuries are as reliable as for vehicular injuries. Agreement between scores and other methods of assessing severity (probability of survival, length of hospital stay, number of operations, and subjective judgements of clinical experts) will also be determined.

FINDINGS:
To compare and evaluate the effectiveness of Emergency Medical Services Systems and components in improving the care of injured patients, it is essential that adequate methods be provided to account for differences in the severity of the injury and the probability of dying. This study will estimate the limits of reliability of the two scales most commonly used for this purpose, and will therefor permit credible evaluations of these Federal activities in Emergency Medical Services which are intended to improve the care of trauma victims and the needs, if any, for continued effort.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03626 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Applications of Decision Theory to the Triage Process

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-01-79	06-30-80	47,664	47,664	52,613	LEDLEY, ROBERT S GEORGETOWN UNIVERSITY 37TH AND O STS NW WASHINGTON DISTRICT OF COLUMBIA 20057

OBJECTIVE:
To explore the applicability of decision theory to the process of developing algorithmic triage protocols and to define future research and data collection requirements for Emergency Medical Systems (EMS).

APPROACH:
The project will develop an algorithmic decision theory model for use in the pre-hospital phase of the emergency medical triage process for acute trauma and burn patients. Based upon these conditions clinical and operations research literature will be reviewed in order to estimate parameters for the mathematical model. Scenarios involving different time-to-treatment combinations and different survival curves will be used. Clinical and logistical factors will be merged in the decision node of the triage process. In addition, the study will determine the amount and precision of clinical data, and the level of precision in survival curves, necessary to support the triage process on a scenario-specific basis. Results will be tested and analyzed on the basis of hypothetical data. The final report will include the design of a follow-up study.

FINDINGS:
Through this feasibility study, on 1,989 patients admitted to Washington Hospital Center between 1977 and 1979, it was found that decision theory was applicable to: the process of developing algorithmic triage protocol and defining future research and data collection requirements for emergency medical systems. The basis was the analysis of five variables in this population which classified patients according to the severity of their condition; namely, respiratory expansion, capillary refill, eye-opening, verbal response and motor response. The results of this study will be the basis for a subsequent full-blown proposal to fully develop methodology, which should provide analytic tools for use by regional health planning authorities, a quality control technique for the analysis of pre-hospital triage procedures, and improved input to EMS technician.

RECORD NO. HS03785 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Bias in Comparing Outcomes of Burn Units

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	09-29-81	15,150	15,150	33,892

INVESTIGATOR NAME AND ADDRESS

BERRY, CHARLES C
UNIVERSITY OF CALIFORNIA SAN DIEGO

LA JOLLA
CALIFORNIA 92093

OBJECTIVE:
To assess the bias resulting from standard severity adjustment procedures used in evaluating the effectiveness of those treatments given in different burn units, and to develop less biased methods.

APPROACH:
A mathematical model of the process by which outcomes of burn units are generated will be constructed and used to determine the amount of bias in estimating outcome, assuming the model, and under reasonable ranges of model parameters. This will provide information which should allow for the development of new and less biased procedures for comparing outcomes of such units. It is anticipated that one such procedure will involve the development of the mathematics for correcting for unreliability in the predictors when survival is to be estimated using multiple logistic methods.

FINDINGS:
Data which were collected on the size of burns have been used to estimate the error in measuring burn severity. Mathematical models have been constructed to investigate the amount of bias which could be expected with such error using analysis of covariance to compare the effectiveness of different treatment procedures. Analyses using both logistic and probit functions found a bias of about 5% under a set of reasonable assumptions. This work is to be extended to include the bias from errors in measuring burn depth as well as size. Such improved insight into bias possibilities will likely guide the development under this grant of less biased adjustment procedures with potentially very major consequences. For example, Linn's conclusion of no difference in outcome for burn cases in hospitals may have been due to bias in the analysis methods used.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03819 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Emergency Medical Services Effectiveness Research

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-15-79	09-14-82	418,902	418,902	1,413,671	GUSTAFSON, DAVID H UNIVERSITY OF WISCONSIN MADISON 500 LINCOLN DR MADISON WISCONSIN 53706

OBJECTIVE:
To measure and explain the effect of vertical categorization (regionally integrated transfer agreements) on cost, outcome and actual transfer practice in emergency care. Also examined will be the effect of EMT training, aggressiveness of patient treatment, speed of response and quality of care.

APPROACH:
To collect hospital record abstracts of 20,000 cases over a 5 1/2 year retrospective and prospective period. Hospitals involved include: 20 hospitals from Maine where categorization is regionally integrated in an advanced EMS system; 15 from the Green Bay, Wisconsin area, where categorization has recently been introduced; and 15 from the Madison, Wisconsin area, where no formal categorization exists. Severity indices, developed for trauma and ischemic heart disease by this Wisconsin group will be used to stratify patients into comparable groups. The independent variables include the category of the hospitals, the categorization system, severity of the patient's condition, quality of care given in the emergency department, the specific hospital where care is rendered, elapsed time before care is given and aggressiveness of care for trauma patients. Outcome variables include mortality, length of stay, functional capacity of patients, transfer rates and delays in transfers. Multivariate analysis will determine the effects the independent variables have on these outcomes.

FINDINGS:
This study addresses an important issue: categorization and transfer agreements. These two features are the cornerstone of the government's EMS program and must be implemented as a prerequisite for obtaining Federal support for advance life support systems. To date there has been no rigorous, scientific investigation of the value and effectiveness of them. This project will conduct such a study.

RECORD NO. HS03826 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Impact of EMS System Development in Rural Areas

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	09-29-83	301,053	301,053	1,799,538

INVESTIGATOR NAME AND ADDRESS

POZEN, MICHAEL W
BOSTON HEALTH AND HOSPITALS DEPARTMENT
818 HARRISON AVE
BOSTON
MASSACHUSETTS 02118

OBJECTIVE:
To measure the effectiveness of incremental improvements in rural EMS systems in terms of reduction in death and disability from heart disease.

APPROACH:
The utilization, treatment and results of emergency care in three rural EMS systems differing in their level of sophistication will be compared. A Basic Life Support system in western Massachusetts, a system in West Virginia in transition to paramedic-staffed Advanced Life Support, and a fully-implemented Advanced Life Support system in Cape Cod, Massachusetts, will be examined at three points in time. Analyses will include the accuracy of diagnosis, appropriateness of treatment, and results of care for patients with cardiac emergencies.

FINDINGS:
Procedures for collecting complete and accurate data from each research setting are operating, and full cooperation has been gained from ambulance systems, hospitals, and health departments. Data collection is proceeding well and preliminary analyses have demonstrated that an adequate number of cases will be available for study. This project is obtaining information about the care of heart attack victims in rural areas, the effectiveness of regional EMS systems in improving cardiac care, and the extent to which each of the elements comprising the system contributes to lowering mortality. Because rural areas are characterized by longer response times, fewer calls per technician (and therefore less field experience), and higher costs per run, it is important to understand the extent to which the mandates of the Federal EMS program, designed primarily for high population density areas, can be expected to improve cardiac care in rural settings.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03961 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Evaluation of a Drug Formulary and Pharmacy at an HMO

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	06-30-82	26,992	26,992	50,699	BUSH, PATRICIA J GEORGETOWN UNIVERSITY 37TH AND O STS NW WASHINGTON DISTRICT OF COLUMBIA 20057

OBJECTIVE:
To compare the quality and economy of prescribing practices in two pairs of pharmacies in four HMO centers; all four HMO centers will install a drug formulary, but only two centers will start in-house pharmacies.

APPROACH:
Prescriptions and patient medical records will be reviewed for the six months prior to implementation of the formulary to assess the appropriateness of prescribing against criteria. Data on prescribing will also be collected after implementation of the formulary and the pharmacy and compared with the earlier data to determine any changes. The project will also assess the acceptability of these two mechanisms to the prescribers at the HMO, as well as compare total start-up and operating costs under the formulary and in the pharmacies.

FINDINGS:
The study results will indicate (1) whether a drug formulary lowers the costs and raises the quality of prescribing, (2) whether installing a pharmacy is cost-effective compared to having formulary prescriptions filled at neighborhood pharmacies, and (3) the degree of acceptance of drug formularies and pharmacies by the prescribing staff in an HMO located in an academic medical center. The project takes advantage of a unique opportunity to evaluate a natural experiment in an area of concern to HMO administrators, prescribers, pharmacists and members.

RECORD NO. HS04005 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Evaluation of Emergency Room Referral System

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-80	46,783	46,783	46,783	CHARNEY, EVAN SINAI HOSPITAL OF BALTIMORE BELVEDERE AVE AT GREENSPRING BALTIMORE MARYLAND 21215

OBJECTIVE:
To identify the demographic, medical, attitudinal and other factors which correlate with the successful referral of patients from an emergency room to a source of continuous and comprehensive primary medical care.

APPROACH:
Using both retrospective and prospective record reviews, as well as interviews with patients, the investigators will examine differences between patients who comply with recommendations to seek primary care at an appropriate facility and those who do not comply with such recommendations. Comparisons between these groups will include previous experience with medical care facilities, insurance status, socio-demographic data and urgency of medical complaint. The effectiveness of different levels of effort in making referrals will be examined, and reasons for failure to keep appointments will be sought.

FINDINGS:
Improper use of emergency rooms by patients with non-urgent conditions not only increases the cost of care to the patient, but also produces episodic, rather than continuous care. Methods to improve preventive care are not likely to receive proper emphasis in such a regimen, but attempts to refer patients to appropriate primary care centers have not been notably successful. Information about patients who do not comply with referral recommendations and types of referral efforts which are successful can lead to more appropriate and more economical care. The subject is important to issues surrounding emergency room and primary care center staffing, to patient education programs, and to preventive medicine efforts. This study found that about a third of patients complied with referral to primary care. Factors associated with compliance were; having an appointment made for the patient by the emergency care provider; patient age; self-reported health status; previous experience with a primary care system; and medical need for follow-up care.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS04029 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Factors Determining Outcome of Hospitalized Trauma

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	06-30-81	44,386	44,386	44,386

INVESTIGATOR NAME AND ADDRESS

LEVY, PAUL S
UNIVERSITY OF ILLINOIS MEDICAL CENTER
BOX 6998. 1737 W POLK ST
CHICAGO
ILLINOIS 60612

OBJECTIVE:
To improve the Estimated Survival Probability (ESP) Index (a technique for grading the severity of hospitalized trauma) and to study the relationship between hospitalized trauma outcomes (discharge status, interval between admission and death, length of hospital stay) and variables such as bedsize of hospital, race, sex and geographic location.

APPROACH:
The EPS index was developed using ICDA codes to predict the probability of surviving a trauma condition. The ESP Index will be improved by making it age-specific using data from a subset of the Hospital Discharge Survey (1971-73), a national survey of non-Federal short stay hospitals conducted by NCHS. Probabilities will be obtained separately for three age groups (0-44 years, 45-65 years, and 65+ years) and for frequently occurring ICDA codes. The ESP Index will than be retrospectively tested on the Illinois Trauma Study data set. Special attention will be paid to situations suggested by a literature review such as the impact which time, place, race and sex have on trauma outcome and that mortality increases with increasing hospital bed size even when adjusted for age and severity of injury. The sensitivity of the ESP to coding errors, and the assumption that outcomes from multiple trauma are simple multiplicative functions of single trauma will be specifically investigated.

FINDINGS:
Identification of factors affecting hospitalized trauma are of significance both in research concerning quality of care and in planning of emergency medical services. The index is not proposed for use in individual cases such as for a triage function.

RECORD NO. HS02142 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - SYSTEMS INNOVATIONS

TITLE: Computer-Based Ambulatory Quality Assurance Program

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
05-01-76	10-31-79	59,978	636,565	636,565	WINICKOFF, RICHARD N HARVARD COMMUNITY HEALTH PLAN 80 BRIGHTON AVE (ALLSTON) BOSTON MASSACHUSETTS 02134

OBJECTIVE:
To develop a quality assurance program based on a computerized ambulatory medical record at the Harvard Community Health Plan clinic.

APPROACH:
Grantee will develop process and outcome measures to assess the quality of care via computer-based records regarding eight tracer disease conditions. These assessment methods will be implemented into the ambulatory clinic practice.

FINDINGS:
Quality assessment using process and outcome criteria will meet formal requirements of the HMO Act of 1973. Grantee expects to demonstrate the utility of the COSTAR (Computerized Stored Ambulatory Record) system in monitoring compliance with requirements for quality care established for the clinic and will assess the impact on provider and system behavior of concurrent information feedback to providers.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02512 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - SYSTEMS INNOVATIONS

TITLE: Community Planning for Emergency Medical Services

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-30-76	11-30-79	59,402	635,103	635,103	RICCI, EDMUND M UNIVERSITY OF PITTSBURGH 4200 5TH AVE PITTSBURGH PENNSYLVANIA 15260

OBJECTIVE:
To examine the planning process in the context of establishing a community-wide emergency medical services system.

APPROACH:
The study consists of describing the community planning process for emergency medical care in sixteen urban and rural communities that differ in size, character, and region. The research will involve case studies of the communities.

FINDINGS:
The study is expected to identify conditions that facilitate or impede the planning process. The emergency medical service system program offers a convenient, experimental model for analysis.

RECORD NO. HS03542 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - SYSTEMS INNOVATIONS

TITLE: Short Procedure Units: Impact and Performance Factors

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-78	02-28-80	0	53,364	53,364

INVESTIGATOR NAME AND ADDRESS

JONES, ROBERT C
UNIVERSITY OF PENNSYLVANIA

PHILADELPHIA
PENNSYLVANIA 19174

OBJECTIVE:
To describe the status in the Philadelphia regional area of Short Procedure Units (SPUs) which are delivery mechanisms for outpatient surgical procedures, to evaluate the impact of SPU's on cost savings, and to investigate such factors as organizational and operational characteristics in relation to performance.

APPROACH:
Data will be gathered from the 18 SPUs in the Philadelphia Health Systems region which have been approved for Blue Cross reimbursement and which became operational during 1975-76. All 18 SPUs are hospital affiliated. Description of the current status of these SPUs will include organizational and operational factors (staff size, facilities available, etc.), service data (volume of procedures performed categorized by patient age, sex, and anesthesia type), trend information (length of stay, utilization, etc.), and charges (tests, anesthesia, etc.). The purpose of the retrospective study is to compare SPU patients and their matched controls on the basis of billing information (tests, operating room, recovery room, anesthesia). The controls are patients admitted to the affiliated hospital prior to the SPU initiation and will be matched to SPU patients for age, sex, diagnostic category and procedure performed. No cases or controls with multiple diagnoses will be included in the study.

FINDINGS:
Findings relating to costs are expected to include case costs by diagnostic category and procedure for approximately 10 SPUs, assessments of pre- and post-SPU case costs, and relative case cost savings for each SPU. A set of recommendations regarding model protocols, organization and development of SPUs should be a result of this study.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03555 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - SYSTEMS INNOVATIONS

TITLE: The Effect of Telemetry on Advanced Life Support Care

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-82	169,511	169,511	527,934	CAYTEN, C GENE UNIVERSITY OF PENNSYLVANIA 3609 LOCUST WALK/C9, RM. 302 PHILADELPHIA PENNSYLVANIA 19174

OBJECTIVE:
To examine the extent to which telemetry (radio transmission of electrocardiographic signals) improves the chances that a victim of cardiac arrest will survive.

APPROACH:
Philadelphia is an urban community which presently responds to heart attack emergencies with trained personnel equipped with medications and electrical devices to restore heartbeat. The investigators will determine the value of augmenting the present system with procedures which permit a physician to diagnose a transmitted electrocardiogram and monitor resuscitation during transport to a hospital. After rescue personnel have been tested for their ability to recognize abnormal cardiac rhythms, half of the teams (selected randomly) will transmit electrocardiograms as part of their resuscitation procedures and the other half will continue present procedures. Survival rates of patients treated by each group will be compared.

FINDINGS:
Federal policy requires that an Emergency Medical Services system which provides Advanced Life Support must employ telemetry to insure medical control of the steps in cardiac resuscitation. Telemetry is an expensive element, however, and a number of well-established and very effective systems which employ highly trained rescue personnel no longer use their telemetry equipment. If valid information can be produced to show that training really does substitute adequately for telemetry, the findings would be of great importance to Federal policy. Many communities which are unable to afford the equipment and maintenance costs of telemetry would then be better able to establish Advanced Life Support procedures, a result of particular importance in rural and remote areas where the costs per citizen of installing and maintaining sophisticated communications devices is a major concern to system planners.

RECORD NO. HS03722 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - SYSTEMS INNOVATIONS

TITLE: Locational Analysis of Multi-level EMS Systems

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
08-01-79	09-30-80	26,682	26,682	26,682

INVESTIGATOR NAME AND ADDRESS

STORBECK, JAMES E
UNIVERSITY OF TEXAS AUSTIN

AUSTIN
TEXAS 78712

OBJECTIVE:
To develop and demonstrate programming methods and planning techniques for solving problems of siting three types of EMS facilities characterized by differing levels of life support capabilities.

APPROACH:
A three-tiered hierarchical EMS system is described as "first response", "basic life support," and "advanced life support" capabilities. Based on this system the linear programming problem is to insure that a maximum number of persons is served by each of the three tiers, using available numbers of units (e.g., ambulances, stations) within acceptable response time standards, and assuring that back-up coordination exists between the tiers. The methodology will be demonstrated using population densities, numbers of facilities, response time standards, travel distances, and frequency of emergency services requests in the Austin, Texas area.

FINDINGS:
The methods and techniques will have general significance for planning the siting and facilities in multi-tiered service delivery systems and special importance for EMS systems. Specific benefits for Austin, Texas are likely to emerge as well.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03896 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - SYSTEMS INNOVATIONS

TITLE: Improving Drug Prescribing in Family Practice

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-82	87,421	87,421	272,872	GEHLBACH, STEPHEN H DUKE UNIVERSITY DURHAM NORTH CAROLINA 27706

OBJECTIVE:
To evaluate the efficacy of an "active," personal intervention strategy, providing computer generated feedback, in changing prescribing practices of primary health care providers. Implications of improved prescribing behavior are reduced health care costs and diminished risks of adverse effects.

APPROACH:
Physician prescribing behavior will be tracked with 25 commonly prescribed medications available as both generic and brand-name preparations, with substantial price differences; and with 25 commonly prescribed drugs for which structurally different therapeutic alternatives are available that provide advantages such as reduced toxicity, less frequent dosing, or lower cost. Feedback is provided monthly to physicians in the experimental group, listing drugs prescribed, their frequency of prescription and the suggested alternative generic forms together with dollar savings and/or therapeutic advantages. Drug feedback is provided for subsets of 50 tracer drugs to assess whether changes in the prescribing of generic equivalents are confined to the specific drugs for which providers are given information or whether the improved habits generalize to drugs not on the generic tracer list; 3,500 prescriptions will be evaluated in the 2 family practice clinics every 6 months over a 30 month period.

FINDINGS:
In January 1980, providers in the Family Medicine Center were grouped into strata based on level of experience and randomized into experimental and control groups. Twenty-two physicians were randomized to the experimental group and twenty-two to the control group. At the present time, four rounds of monthly feedback have been completed. A preliminary analysis of results was conducted after two months of feedback and can be seen in tables 1-4. A significant effect of the prescribing feedback is evident even at this early stage. Prescribers in the experimental group have increased their overall use of generics and showed marked changes for certain selected medications like sulfisoxazole and diphenhydramine. Among the therapeutic suggestions, there has been a significant decrease in the use of indomethacin. A small but insignificant trend is seen in improved dosage of penicillin for streptococcal pharyngitis. Although these data are still preliminary, the trend is encouraging. A description of the system and discussion of these preliminary results was given by Dr. Hammond at the World Association of Medical Informatics Conference in Versailles, France, May 1980.

RECORD NO. H505755 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - SYSTEMS INNOVATIONS

TITLE: A Computer Audit to Improve ER Drug Prescribing

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-79	01-31-81	54,250	54,250	54,250	BRAND, DONALD A YALE UNIVERSITY NEW HAVEN CONNECTICUT 06520

OBJECTIVE:
To measure the effectiveness of a computer-assisted medical audit in improving drug prescribing practices in an emergency service setting. The randomized controlled study will also determine 1) if changes in prescriber behavior persist beyond the period of audit, and 2) the relative effectiveness of the audit as a function of the delay between a particular episode of patient care and the providers' receipt of the case audit report.

APPROACH:
The care of patients treated for soft tissue injuries in three hospital emergency departments, one of which will provide a randomized control group, will be concurrently reviewed during a one-year period. A computer-assisted audit comparing problem-specific medical records to be previously developed clinical algorithm will be conducted. Providers will receive daily case audit reports indicating instances of deviation and will be asked to give reasons for the deviations. The deviation rates will be used as the measure of the quality of drug prescribing and will be calculated before, during, and after the system has had a chance to influence physician behavior. Different feedback delays and hospital size, affiliations, and staffing patterns will be correlated with their respective deviation rates.

FINDINGS:
The system as proposed has clear cost containment features that are embedded in a general model of quality assurance, medical education and more rational drug prescribing practices. If proven successful the approach can be applied to other clinical areas, both surgical and non-surgical; and since the system can be accessed through ordinary telephone lines, it would be available to any institution desiring to monitor the care of its patients and provide continuing education to its physicians.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS04066 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - SYSTEMS INNOVATIONS

TITLE: Cost Effective Strategies in Ambulatory Care

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	06-30-81	224,144	224,144	228,215	KOMAROFF, ANTHONY L PETER BENT BRIGHAM HOSPITAL 721 HUNTINGTON AVE BOSTON MASSACHUSETTS 02115

OBJECTIVE:
To design cost-effective strategies for common clinical conditions based on decision analysis.

APPROACH:
Fifteen of the most common clinical problems seen in ambulatory care settings, for which a reasonable amount of probabilistic data exists, either in the medical literature or in various data bases, have been selected for study. Based upon common presenting symptoms of the selected conditions, alternative action options for diagnostic or therapeutic measures are identified. Decision "trees" which graphically represent the alternative action options and their outcomes are designed, and relevant probabilities associated with the branches, based upon the medical literature, available data bases, or expert opinion, are identified. Finally, "superior strategies", which factor in costs and conditional probabilities of clinical outcomes, will be calculated. Sequential test-ordering and therapeutic strategies which have the greatest cost-effective yield will be compared to typical current practice, as reflected in the National Ambulatory Medical Care Survey data.

FINDINGS:
Several decision trees have been developed and are being refined. Others have yet to be constructed. It is anticipated that the research will yield a set of explicit diagnostic and therapeutic strategies which will be useful to physician decision-making, as well as a series of prioritized research questions where gaps in information are encountered.

RECORD NO. HS02129 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - MANPOWER TRAINING

TITLE: Socialization: EMS and Other Residency Programs

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-30-76	12-31-80	129,052	512,382	512,382

INVESTIGATOR NAME AND ADDRESS

ANWAR, REBECCA A
MEDICAL COLLEGE OF PENNSYLVANIA
3300 HENRY AVE
PHILADELPHIA
PENNSYLVANIA 19129

OBJECTIVE:
To describe and analyze the characteristics of physicians who enter and remain in training programs designed to produce staff who specialize in the delivery of emergency medical services (EMS).

APPROACH:
This study will involve an attempt to characterize the type of individuals who decide to enter emergency medical service residencies; a national survey to compare residents in this specialty with residents in surgery and internal medicine; a panel study to compare those who complete training programs with those who drop out; and recommendations regarding selection criteria and the structure of the training programs.

FINDINGS:
The data derived from the several phases of the study will be used to define the most promising applicants for specialty training in this field and preferred structure of the training program.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02507 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - MANPOWER TRAINING

TITLE: Rural Volunteer Emergency Medical Coordinators

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-77	08-31-80	161,176	528,096	528,096	MYRICK, JUSTIN A GEORGIA INSTITUTE OF TECHNOLOGY 225 NORTH AVE NW ATLANTA GEORGIA 30332

OBJECTIVE:
To develop, implement and evaluate a program of medically trained Emergency Medical Coordinators (EMCS) for small rural communities.

APPROACH:
Carefully selected residents of two communities outside suburban Atlanta will be trained in advanced first-aid and emergency care, emphasizing such patient stabilization concepts as airway and hemorrhage control, and cardiopulmonary resuscitation. Evaluation of the experimental programs will include an analysis of performance, outcomes and patient acceptance.

FINDINGS:
Both Congress and the National Science Foundation, among others, have expressed concern for the improved provision of emergency medical services in rural areas. This study will provide an evaluation of the effectiveness of a program to improve such services that could be adopted in rural settings nationally.

RECORD NO. HS02536 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - MANPOWER TRAINING

TITLE: Effectiveness of Advanced EMT's Versus Basic EMT's

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-77	02-28-80	61,865	261,325	261,325

INVESTIGATOR NAME AND ADDRESS

POZEN, MICHAEL W
BOSTON CITY HOSPITAL
818 HARRISON AVE
BOSTON
MASSACHUSETTS 02118

OBJECTIVE:
To evaluate the effectiveness of 74 advanced Emergency Medical Technicians/Paramedics (400 hour trained) versus 336 basic Emergency Medical Technicians (EMT's) (81 hour trained) in providing pre-hospital care to patients with acute cardiovascular conditions in the semi-rural region of Cape Cod, over a three year period.

APPROACH:
Process measures studied were symptom recognition and appropriateness of treatment. The outcome parameters studied were proximal survivorship through hospital admission and long term survivorship through discharge. A quasi-experimental design was used to test the hypotheses that patients with Acute Ischemic Heart Disease (AIHD) managed by paramedics would have lower mortality rates than those treated by EMT's. Regression analyses were performed to determine the relationship between age and sex specific mortality rates and incidence of AIHD, severity, and utilization of the EMS system.

FINDINGS:
The greatest probability of survival for a patient is to be treated by a paramedic and to have a short response time. The more severe the condition the greater the chance of mortality, the older the patient the greater the chance of dying and males are more likely to die than females. Ambulance utilization tends to be the over 60 population. Results demonstrated that for males 45-64 and females 45-64 utilization of the EMS systems is significantly related to a decrease in mortality. This age group should become the target population for community education programs on the utilization of the EMS system. Experience is the major factor in correctly diagnosing patients with AIHD, not advanced training.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03334 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - MANPOWER TRAINING

TITLE: Crisis Intervention for EMTs and Nurses

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-79	06-30-80	50,155	50,155	50,155	HAMPTON, LEONARD A UNIVERSITY OF GEORGIA ATHENS GEORGIA 30602

OBJECTIVE:
To develop, implement, and evaluate a comprehensive model of intervention training for Emergency Medical Technicians (EMT's) and Emergency Department Nurses, which focused on the psycho-social needs of people experiencing behavioral emergencies.

APPROACH:
The thirty-two hour training program was developed which consisted of two 16 hour segments. One on communication skills training and the other on specific topic training. Teaching techniques included lecture, discussion, role play, problem solving, questionnaire, audio-visual presentations, self report measures and feedback. A total of twenty-one EMT's and nurses were assigned to the two groups. Group 1, experimental group, consisted of 10 EMT's and RN's who received training and were assessed twice. Group 2, control group, consisted of 11 trainees who received no training but also were assessed twice.

FINDINGS:
The 10 who received the communication skills training indicated a significant change in three behaviors from pre-test to post-test. These trainees demonstrated more reflection of feelings, more reflection of content statements, and decrease in confrontation statements. The two attitude measures indicated trainees moved toward more internality and increased locus of control in interpersonal relationships.

RECORD NO. HS03172 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - NEED AND UTILIZATION OF SERVICES

TITLE: A Comparative Study of Non-Scientific Medical Use

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
01-01-79	06-30-81	18,750	18,750	30,088

INVESTIGATOR NAME AND ADDRESS

PESCOSOLIDO, BERNICE A
YALE UNIVERSITY

NEW HAVEN
CONNECTICUT 06520

OBJECTIVE:
This study examines systems of medicine available in society, tracing the development of medical traditions, exploring factors in individual choice, and locating medical care system in relation to sociocultural, economic, political and historical contacts.

APPROACH:
The study defines health and illness and relates these issues to individual, national, and worldwide concerns through the examination of surveys from over 30 countries. It additionally addresses the wide variety of coping styles used past and present, to manage illness and focuses on medical systems including Western medicine and various forms of medicine used in other countries. The study proposes a general model to explain why holistic help (e.g. chiropractic) is sought instead of or in addition to mechanistic (e.g. modern scientific medical care). Data from Bolivia, Canada, Columbia, India, the Ivory Coast, Jamaica, Mexico, Morocco, Sierra Leone, Taiwan, Tunisia, West Malaysia, Upper Volta, and the United States are brought to bear on the hypotheses via logit regression techniques. Referral networks (both lay and professional) are examined using block modeling and discriminate techniques.

FINDINGS:
While the network and social value analyses are at too early a stage to determine substantive results, decision-making analyses have been conducted in Tunisia, West Malaysia, Taiwan, and Canada. Some tentative findings from this study indicate that preferences and choices are different phenomenon and must be carefully distinguished. Additionally, the relationship between migration and use is a complex one and differs for in-migrants and out-migrants. Additionally, availability, sex and education, are at this point the most consistent factors effecting choice of healer and outcome is not significantly related to type of treatment (scientific vs. non-scientific). These results are preliminary and with more refined analyses and the addition of findings from other countries may provide, indeed, a different overall picture.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03268 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - NEED AND UTILIZATION OF SERVICES

TITLE: Hispanic Health Services Research Conference

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-01-78	12-31-79	3,499	38,492	38,492

INVESTIGATOR NAME AND ADDRESS

HOPKINS, CARL E
UNIVERSITY OF CALIFORNIA LOS ANGELES
405 HILGARD AVE
LOS ANGELES
CALIFORNIA 90024

OBJECTIVE:
To develop a practical health services research agenda to produce a body of data which will influence health policy beneficial to the Hispanic population of the United States.

APPROACH:
During a two-day conference, Hispanic and other professionals in the health field will present and discuss information concerning health services research in the Hispanic community. The conference will be structured in a workshop-fashion in order to stimulate the interchange of ideas among participants, including potential users of research findings. The four main workshops to be held during the conference will address the impact of health policy on health services for Hispanic; socio-cultural influences on health services research and delivery; resources development strategies for conducting research; and timely dissemination of Hispanic health services research findings.

FINDINGS:
Legislative proposals addressing National Health Insurance are likely to be enacted within the next five years. It is vital to accurately assess Hispanic needs and problems in order to plan for an efficient program that would be sensitive to the needs of the Hispanic community. Under the Health Planning Act of 1974 (PL 93-641) it is necessary for health professionals to obtain scientific data in order to make decisions affecting Hispanics in the United States.

RECORD NO. HS03667 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - NEED AND UTILIZATION OF SERVICES

TITLE: Illness Behavior in Women Aged 45 to 64

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-79	06-30-80	28,225	28,225	28,225	COX, CAROLE B UNIVERSITY OF MARYLAND AT BALTIMORE 525 W REDWOOD ST BALTIMORE MARYLAND 21201

OBJECTIVE:
To investigate the relationship of social roles and socio-psychological factors to illness behavior in women aged 45-64.

APPROACH:
A random sample of 350 women aged 45-64, members of B'nai B'rith Women, Baltimore, Maryland council, will be selected. A mail questionnaire will be used to gather information on three independent variables; social supports, anticipation of role changes and feelings of failure or success, as well as on the dependent variable, illness behavior. The frequency distribution of the data will be analyzed and contingency tables and multiple regression analyses will be used.

FINDINGS:
The investigator's analysis of data gathered via anonymous mail questionnaires, indicates that the quality of social supports, as defined by the intimacy of relationships, life satisfaction, self-esteem, feelings of success, and the recent illness or death of someone close, are significantly related to illness behavior. The findings suggest that these factors should be considered by health professionals attempting to understand or treat such behavior.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03715 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - NEED AND UTILIZATION OF SERVICES

TITLE: Increasing Health Behavior: A New Technique

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-01-79	05-31-80	16,378	16,378	16,378

INVESTIGATOR NAME AND ADDRESS

ROSS, CAROLINE K
BOSTON UNIVERSITY
881 COMMONWEALTH AVE
BOSTON
MASSACHUSETTS 02215

OBJECTIVE:
To evaluate an educational approach to increasing utilization of a preventive health service, lead poisoning testing, by a high risk urban, lower income population.

APPROACH:
The thirty-minute educational approach included these elements, an emotionally responsive individual in a face-to-face interaction, information organized in terms of health beliefs, and a specific recommendation for action. Two experimental and two control groups were formed. (Experimental I had pre-post interviews, and an educational intervention, Control II had pre-post interviews, Experimental III had an educational intervention plus post interview, and Control IV had a post interview.) The single independent variable was the educational presentation, which included a lead testing calendar, and the dependent variable was the parent initiated lead poisoning testing. The structured interviews were held by telephone; in absence of a telephone, home visits were made. Letters were sent to 306 families who appeard to meet project eligibility criteria, (96) or 31% agreed to participate, (43) or 11% refused to participate and (156) or 51% could not be located. Various strategies (phone calls, home visits and talks with neighbors) were used to find these potential sample members.

FINDINGS:
Of all of the 96 randomly assigned to the four study groups only 61 ultimately were used in data analysis. Families were found to be knowledgeable about lead poisoning, held beliefs which would suggest considerable awareness of lead hazard and when given the opportunity to act did so. Parents' knowledge and beliefs about lead poisoning appear to be the result of direct and personal experience with the problem. Sixty-eight percent of experimental parents obtained lead poisoning tests after education while twenty-seven percent of controls obtained tests. Education, however, can be suggested but not confirmed as a cause for securing tests. The study did not find any change in knowledge, beliefs and skills after education and no relation between these variables and test taking. A possible explanation may be that lead poisoning knowledge and beliefs are not related to action. Non-Medicaid families were more likely to obtain tests regardless of group assignment. The small sample (96) must be considered as a possible factor in the study outcome. There were many problems in locating the potential study sample and in securing interviewers/educators.

RECORD NO. 230760096 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - NEED AND UTILIZATION OF SERVICES

TITLE: Analysis of National Survey Data on Access to Medical Care

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
03-26-76	11-30-79	0	250,000	250,000	ANDERSEN, RONALD M UNIVERSITY OF CHICAGO 5720 WOODLAWN AVENUE CHICAGO ILLINOIS 60637

OBJECTIVE:
To develop measures and indicators of access, utilization and appropriateness in regard to medical care and determine the differential access to care among rural Blacks and Hispanics in the southwestern United States.

APPROACH:
Using data from a national survey sponsored by the Johnson foundation and other data from the American Hospital Association and Health Resources Administration, the project will determine indices of access, utilization and appropriateness of medical care among this disadvantaged population group, ascertain patterns of health practice and certain outcomes including disabilities. It will seek to identify possible strategies for improving access and effectiveness of care. Cross-validity analysis for the various data sources on the same subpopulation will be performed.

FINDINGS:
Understanding linkages between health practices, care-seeking patterns, availability of services and outcomes has aided in identifying appropriate avenues of possible intervention in attempting to improve access to health care for the population, particularly for the disadvantaged.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03097 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - SUPPLY AND ACCESS TO SERVICES

TITLE: U.S. Health Care Delivery Policy and Distributive Justice

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-78	08-31-81	6,085	34,419	73,740	DANIELS, NORMAN TUFTS UNIVERSITY MEDFORD MASSACHUSETTS 02155

OBJECTIVE:
To apply the theory of distributive justice to the problem areas of the national health insurance policy; the distribution of physicians by specialty and geographically; resource allocation and health care for the elderly; preventive versus acute care; and regional health planning priorities.

APPROACH:
The study builds upon and extends a theory of distributive justice to practical issues facing health planners and particularly national health policies. Three theoretical problems addressed in the study are access to health care, resource allocation, and regulation of providers. A literature review in the field of philosophy pertaining to equality of access of services, priorities in macro-allocation decisions about health care resources, and conflicts of interest between health care providers and recipients is the basic source of data employed in the study.

FINDINGS:
The investigator reports that his research indicates: health-related institutions should be governed by a principle of distributive justice that protects fair equality of opportunity rather than governed by the competitive market concept; from the view of the notion of distributive justice, some health care needs are determined as more important than others since they correlate with diseases that impair opportunity; the use of health care technology differs from those for other interests and require justifactory arguments and distribution methods; there are clear limits to the utility of planning methodologies for cost benefit and effectiveness analysis; and the obligations to provide specific manpower for certain health care needs will in turn affect the autonomy and liberty of the health care professionals.

RECORD NO. HS03125 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - SUPPLY AND ACCESS TO SERVICES

TITLE: Access to Services by the Black Urban Elderly

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-79	06-30-82	75,315	75,315	289,072

INVESTIGATOR NAME AND ADDRESS

REED, WORNIE L
WASHINGTON UNIVERSITY
LINDELL AND SKINKER BLVD
SAINT LOUIS
MISSOURI 63130

OBJECTIVE:
The major objectives of the study are to determine elderly persons' needs for services, access to medical transportation, and selected social services. Particular attention will be given to barriers to services and factors enabling the use of services.

APPROACH:
The study observes the inner-city elderly population in St. Louis, Missouri. A sample of the non-institutionalized black population 60 years and over will be drawn on a census tract bases. A matching group of whites identified in the areas will be used as a comparison group; however, they will not be representative of the elderly white population of St. Louis. Interviews will be conducted of these populations using structured questionnaires.

FINDINGS:
In attempts to match needs to use and availability of services, the project intends to provide information to local health and city planners. An examination will be conducted on the interrelationship to various service programs. Comparisons will be made of differences between black and white populations on the need for, use of, and availability of services. Projections of service needs will be based upon analysis of the persons aged 60-64 years.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03664 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - PUBLIC PROGRAMS

TITLE: A Comparative Study of the Implementation of Child Health Policy

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-79	04-30-81	26,843	26,843	29,262	COBURN, ANDREW F BRANDEIS UNIVERSITY 415 SOUTH ST WALTHAM MASSACHUSETTS 02154

OBJECTIVE:
To examine how effectively the child health sections of the 1967 Amendments to Title V of the Social Security Act were implemented by the states, thereby determining the extent to which the intent of Federal legislation has been fulfilled.

APPROACH:
This will be a comparative case study focusing on four states and their experience in implementing the 1967 Child Health Amendments to Title V of the Social Security Act, with emphasis on two of the special projects implemented by the states-The Maternal & Infant Care and Child & Youth Projects. The study establishes a set of hypotheses containing ten political and administrative preconditions considered essential for effective implementation. Two pairs of states will be chosen based on these 10 preconditions-one pair exemplary of conforming to these preconditions in the implementation of the Programs of Projects after 1974; the other pair exemplary of states where conformity to these preconditions is weak. Data collected through existing documents, questionnaires, and site visits to each of the four study states will be analyzed to determine the association between the degree of conformity with the hypothesized preconditions and the effectiveness of implementation in each state.

FINDINGS:
One outcome of this study will be the development of specific policy recommendations for improvement in the implementation and administration of maternal and child health policy and programs under Title V. Also, this study will be useful in identifying factors contributing to the effectiveness of the states' efforts to implement the Programs of Projects, as well as identifying factors which serve to impede effective implementation in the states. A better understanding will be developed in the importance of implementation as a critical dimension of intergovernment relations and the grants-in-aid system, which will be useful in future considerations of National Health Insurance for mothers and children and specific grant programs for child health services.

RECORD NO. HS03710 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - PUBLIC PROGRAMS

TITLE: A Study in Policy Activation: The Case of Early and Periodic Screening, Diagnosis, and Treatment (EPSDT)

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-01-79	05-31-80	29,221	29,221	29,221

INVESTIGATOR NAME AND ADDRESS

MURRAY, RILLA A
UNIVERSITY OF NORTH CAROLINA CHAPEL HILL

CHAPEL HILL
NORTH CAROLINA 27514

OBJECTIVE:
To examine the patterns of organizational interaction which have influenced the way in which the Early and Periodic Screening and Diagnosis and Treatment Program (EPSDT) has evolved from a statement of law to an operational program.

APPROACH:
A case study approach is proposed which emphasizes the concept that program or policy implementation takes place in an inter-organizational context characterized by competition for control of the way in which resources and influence are distributed. The organizations to be studied are those which were not officially responsible for the EPSDT program but were documented to have exercised influence in interpretation and policy formation at the national level. Document analysis supplemented by interviews with key actors will be the data collection method. The method of analysis will be to devise a scheme for categorizing events and identifying properties of the categories. The focus of the scheme will be organizational interactions.

FINDINGS:
This study is expected to increase the knowledge base in the area of policy implementation, especially concerning the concept of public responsibility. Specific knowledge of the implementation of EPSDT may aid participation in new programs by consumer and child advocacy groups, as well as by Federal, State and local planning and service delivery agencies.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03720 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - PUBLIC PROGRAMS

TITLE: Impact of EPSDT on Health Services Utilization

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-01-79	12-31-80	19,616	19,616	19,616	SPIELBERG, LAUREL A JOHNS HOPKINS UNIVERSITY CHARLES AND 34TH STS BALTIMORE MARYLAND 21218

OBJECTIVE:
To describe the State of Maryland's Early and Periodic Screening Diagnosis and Treatment (EPSDT) program in terms of the population being served and prevalence of conditions being detected, and to assess the impact of this legislatively mandated screening program upon the utilization of health services by poor children.

APPROACH:
This study is to compare rates, types, and patterns of health services utilized and health services costs incurred by two groups of Medicaid children for the duration of one year. One group will have received preventive health screening during the first quarter of fiscal year 1977; a comparable group will remain unscreened. The group screened will be divided into those having positive and negative results. Multivariate analysis will be used to determine if health service events and related costs can be predicted from the variables available to this study.

FINDINGS:
Predictive models of health service utilization patterns among low-income populations will be developed. The project has relevance to Child Health Assessment Program (CHAP) and related policy issues.

TITLE: Provider Response and Cost of Dentistry for the Elderly

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-77	12-31-79	0	285,877	285,877	MILGROM, PETER M UNIVERSITY OF WASHINGTON SEATTLE WASHINGTON 98195

OBJECTIVE:
To determine the characteristics of elderly dental care utilization and needs and the costs of treating needs under various insurance plans.

APPROACH:
Secondary source data will be used to analyze the cost of dental care for the elderly. These include the dental data collected during the Health and Nutrition Examination Survey (HANES), the survey conducted by the Center for Health Administration Studies in Chicago, and from reports of the oral conditions of the elderly found by a group of dentists in the Seattle area. Typical problem sets will be developed from these data to represent typical cases of actual need for dental care in the elderly. The problem sets will be used to obtain responses from practicing dentists regarding the treatment of these conditions and for determining the cost of care, as well as an estimate of the quality of care. Cost projections regarding dental needs of the elderly will be based on the national sample obtained by the HANES Survey. Cost determination will also be reviewed in light of three existing dental insurance plans (Medicaid, a prepaid plan for reasonable care, and a prepaid plan for high option care).

FINDINGS:
Given that the aged population is growing, becoming more politically active, and achieving greater access to care through dental insurance programs, it is important from a planning perspective to know rates of utilization and the extent of unmet need, and how differences in insurance coverage affect the cost of treating unmet needs.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02443 CATEGORY: HEALTH INSURANCE - BENEFITS AND COVERAGE

TITLE: NHI Redistributive Impact on the Disadvantaged Poor

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-78	09-29-80	0	81,014	81,014	BROWN, MURRAY G DALHOUSIE UNIVERSITY HALIFAX CANADA

OBJECTIVE:
To estimate the redistributive impact of the initiation of national health insurance on the disadvantaged poor who were previously covered by a comparable publicly-funded insurance plan in the province of Nova Scotia.

APPROACH:
Physician utilization data for a cohort of about 9000 insured welfare recipients and a control cohort of about 100,000 insured non-poor persons covering the period 1967 to 1973 (2 years pre-NHI and 5 years post-NHI) are being examined to determine whether the access to physician services among these groups was affected by the change to one universal insurance program. The analysis plan involves a series of separate multiple regressions for the poor and non-poor with the alternative dependent variables (age, sex, specific utilization) weighted by 1971 fees to control for service mix. The redistribution effects of NHI will be estimated as a dummy variable after standardizing for other determinants of utilization.

FINDINGS:
The effect of universal health insurance on the use of medical care services by poor persons who were previously provided access to care through a welfare program which covered medical care services will be observed. The net redistributive effects of universal national health insurance will depend on the change in the relative money and time costs to poor and non-poor persons. The researchers hypothesize that as health care services are made more universally and equitably accessible to the entire population, use by the poor who were previously selectively covered will be shown to be decreased proportionately when access to care for the non-poor is improved. Supply and access of health care to the disadvantaged is a primary research focus of the National Center for Health Services Research and information from this study will have relevance to policy options concerning the distributional impact of alternative national health insurance proposals.

TITLE: A Policy Analysis of Coverage for Low Vision Services

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-28-79	09-30-81	33,167	33,167	49,189

INVESTIGATOR NAME AND ADDRESS

KIRCHNER, CORINNE
AMERICAN FOUNDATION FOR THE BLIND
15 W 16TH ST
NEW YORK
NEW YORK 10011

OBJECTIVE:
To provide information about the financing and delivery of low vision services.

APPROACH:
Information will be collected primarily through mail questionnaires sent to all known public and private low vision facilities in the US and to a representative sample of third party payers. Low vision clinics will be described in terms of their staffing and organization, characteristics of clients served, and availability, scope, and comprehensiveness of services and optical aids provided. Eligibility requirements will be explored, as well as the costs of services and who pays for them. Approximately 200 public and private third party payers will be surveyed to investigate characteristics of insurance coverage for low vision services and aids. Information sought will relate to eligibility, services covered, and reimbursement policies. Benefits available for low vision services through public programs, such as CHAMPUS, Medicare, Medicaid, and Vocational Rehabilitation, will also be investigated.

FINDINGS:
Information from the low vision clinic survey will improve current understanding of many aspects of low vision service delivery including what services are being provided, by whom, in what types of facilites and characteristics of those receiving services. The third party payer survey will provide information of direct policy relevance in the area of reimbursement for low vision services, by identifying the range and limitations of coverage provisions currently existing. The study addresses an issue which has been identified as important under Section 222 of P.L. 92-603 and in current deliberations over National Health Insurance.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 233793024 CATEGORY: HEALTH INSURANCE - BENEFITS AND COVERAGE

TITLE: Effect of Cost Sharing on Beneficiaries of UMW Health Plan

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-28-79	03-27-81	342,765	342,765	342,765	CLARK, JERRY UNITED MINE WORKERS OF AMERICA 2021 K STREET WASHINGTON DISTRICT OF COLUMBIA 20006

OBJECTIVE:
The purpose of this study is to examine the impact on utilization of health services by a beneficiary population accustomed to free health care prior to the implementation of cost-sharing on July 1, 1977.

APPROACH:
The contractor will prepare an analysis of the impact of the introduction of 40 percent cost-sharing on beneficiaries and providers of care by the United Mine Workers of America Health and Retirement Funds which became effective on July 1, 1977. The analysis will center on the changes in the use, cost and charges for medical services as a result of the cost-sharing. Samples of the beneficiaries shall be determined by review of available data from the contractors' claims and enrollment rolls.

FINDINGS:
The cost-sharing program is expected to have a substantial effect upon health care utilization. Visits to the doctor, hospital admission, services per visit and costs to the health care plan are all expected to be reduced. Within visits to the doctor, it is expected that preventive care and upper respiratory care visits will be automatically reduced. A smaller, but significant reduction is expected in visits for chronic care.

RECORD NO. HS02995 CATEGORY: HEALTH INSURANCE - DELIVERY SYSTEMS EFFECTS

TITLE: Efficiency and Information in Health Insurance

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
04-01-78	08-31-80	37,692	73,420	73,420

INVESTIGATOR NAME AND ADDRESS

BARZEL, YORAM
UNIVERSITY OF WASHINGTON

SEATTLE
WASHINGTON 98195

OBJECTIVE:
To determine how competitive forces either reduce or eliminate inefficiency due to the insurance problems of moral hazard (the overuse of health services because insurance makes direct consumer cost less than actual resource cost), and adverse selection (the ability of the individual with more than average physical liabilities to buy an insurance premium that falls short of the expected true cost).

APPROACH:
This exploratory research grant will empirically examine whether the diversity of features found in insurance contracts indicates the health insurance industry's response to the opportunity to increase profits by reducing moral hazard and adverse selection. The investigator will study data on both hospital utilization and the loading factors of various types of insurance coverage. Utilization data will be used to test the moral hazard hypotheses that insurers attempt to reduce the demand elasticity for services covered under a benefit package by insuring substitute services but not complementary services. Data concerning administrative costs and profits will be used to examine how these loading factors are distributed in response to potential adverse selection. Multiple data sources including the Washington State Insurance Commissioner, Blue Cross/Blue Shield and the CHAS-NORC data from the 1971 Survey of Health Service Utilization and Expenditures will be analyzed using multiple regression techniques.

FINDINGS:
It is suspected that insurers have developed a sophisticated technology in defining health insurance contracts to control the utilization of certain services. Understanding this technology and its effectiveness should be useful to those responsible for the design and administration of National Health Insurance.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 233793022 CATEGORY: HEALTH INSURANCE - DELIVERY SYSTEMS EFFECTS

TITLE: Data Processing Support Services

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-28-79	08-01-80	345,833	345,833	981,627	LEMAT, MARY FRANCES SOCIAL & SCIENTIFIC SYSTEMS, INC. 2401 VIRGINIA AVENUE, NW WASHINGTON DISTRICT OF COLUMBIA 20037

OBJECTIVE:
The NCHSR funded NMCES to provide data to support analyses of major issues of national health policy. The most important of these issues is National Health Insurance. This contract is to provide the data processing support for modelling National Health Insurance alternatives and all the component analyses such modelling entails.

APPROACH:
Because the number and nature of the research activities supported by this contract varies greatly, the support activities also vary greatly. The primary activities include: Development and maintenance of analytical and simulation files, and program development for simultaneous estimations and microsimulation models.

FINDINGS:

RECORD NO. 230760268 CATEGORY: HEALTH INSURANCE - COMPREHENSIVE EXPENDITURE STUDIES

TITLE: National Medical Care Expenditure Survey

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-29-76	04-30-81	1,267,434	21,039,898	21,694,424

INVESTIGATOR NAME AND ADDRESS

WOODSIDE, MARY B
RESEARCH TRIANGLE INSTITUTE
P.O. BOX 12194
RESEARCH TRIANGLE PK
NORTH CAROLINA 27709

OBJECTIVE:
The objective of this contract is to provide data for a series of research studies being conducted in the Intramural Research Division as a part of the National Health Care Expenditures Study.

APPROACH:
Data for NMCES were obtained in three separate, complementary stages which surveyed (1) approximately 14,000 randomly selected households in the civilian noninstitutionalized population and in which each household was interviewed six times over an 18-month period during 1977-78; (2) physicians and health care facilities providing care to household members during 1977; and (3) employers and insurance companies responsible for their insurance coverage.

FINDINGS:
The National Health Care Expenditures Study will analyze a number of issues: the cost, utilization, and financing implications of various national health insurance proposals; the influence of Medicare and Medicaid programs on the use of medical services and the costs of providing care; the extent of and reasons for changes in Medicaid participation over time; the extent to which different government programs at the Federal, State, and local levels affect access to care in different treatment settings; the distribution of benefits to individuals and businesses under current tax laws concerning medical and health insurance expenses, and the potential changes in the distribution of such benefits were these laws to change; the costs of of illnesses for different diagnostic problems in different treatment settings; and the breadth and depth of coverage, and the proportion of medical costs paid by health insurance.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 233783018 CATEGORY: HEALTH INSURANCE - COMPREHENSIVE EXPENDITURE STUDIES

TITLE: Data Processing for National Medical Care Expenditure Survey (NMCES)

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-26-78	07-01-80	0	792,308	792,308	THORNTON, ROBERT H RESEARCH TRIANGLE INSTITUTE P.O. BOS 12194 RESEARCH TRIANGLE PK NORTH CAROLINA 27709

OBJECTIVE:
The purpose of this contract was to provide data processing support to the National Health Care Expenditures Study.

APPROACH:

FINDINGS:

RECORD NO. HS03647 CATEGORY: HEALTH MANPOWER - LABOR SUBSTITUTION

TITLE: Impact of Opthalmic Technicians on Outpatient Care

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-79	06-30-81	29,388	29,388	51,381

INVESTIGATOR NAME AND ADDRESS

TROBE, JONATHAN D
UNIVERSITY OF FLORIDA

GAINESVILLE
FLORIDA 32611

OBJECTIVE:
To assess the cost-effectiveness, measurement consistency and patient and staff acceptance of opthalmic technicians in the delivery of outpatient eye care services.

APPROACH:
A minimum of 500 outpatients will receive multiple examinations at the VA Hospital Gainesville Eye Clinic by opthalmic technicians, opthalmic residents and opthalmologists. Criteria will include such items as patient history, observations, measurements, diagnosis, and disposition. Tasks involved in the examinations will be inventoried and task completion times will be recorded for the technicians and the MDs. Patient and staff satisfaction will be assessed using questionnaires and interviews. Various optimal staffing patterns (i.e., technician to physician ratio) will be investigated under various combinations of task assignments, facility configurations, patient mixes and factor prices.

FINDINGS:
Specific findings are expected concerning the impact of the utilization of ophthalmic technicians within an outpatient setting. Findings will have general relevance for planning issues such as the extent that the physician extender roles can be applied to eye and vision care and the magnitude of savings in time and money resulting from manpower substitutions. Preliminary findings at the end of year one indicate there is no significant difference in the quality of care provided by the ophthalmic technicians and ophthalmologists and patients' satisfaction with care by the technician was at least as high as, and in many cases higher, than satisfaction with the physicians.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02626 CATEGORY: HEALTH MANPOWER - PHYSICIAN BEHAVIOR

TITLE: Project TALENT Physician Career Development Study

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
03-01-78	10-31-79	17,263	140,139	140,139

INVESTIGATOR NAME AND ADDRESS

WILSON, S REITZ
AMERICAN INSTITUTES FOR RESEARCH
BOX 1113
PALO ALTO
CALIFORNIA 94302

OBJECTIVE:
To investigate the personal, social and educational factors which contribute to the present geographic, specialty, and practice pattern distribution of physician manpower. Barriers to medical career entry (with particular attention to women and minority groups) will be identified.

APPROACH:
Data obtained from the Project Talent Longitudinal Study and the AAMC on a national cohort of Americans now in their early 30's will be analyzed. Data were collected on 400,000 high school students in 1960 from which a sample of 10,000 has been selected that includes 2,364 medical school applicants and 7,500 non-applicants whose abilities and interests put them in a potential manpower pool. These data have been augmented by 1976 AMA Physician Masterfile data. The AMA has identified 1,603 of the total number of students in project TALENT as becoming physicians. Variables to be analyzed include early characteristics assessed in high school; background characteristics; level of education; personal experiences; career outcomes; and personal situations. Career Path Profiles will be developed using a causal path model that estimates the relative importance of background, personal, and experiential factors in determining career outcomes. Discriminant Analysis will be applied to the model to derive Indices of Career Outcome Potential, which reflect the probability of a given outcome in terms of particular characteristics.

FINDINGS:
Data from AIR's Project Talent Longitudinal Study, the AMA, AAMC and BHM were used to identify characteristics of individuals and their educational institutions that are related to medical career choices for TALENT's nationally representative sample of over 1600 physicians. Physicians in different sized communities and specialties were readily distinguished from each other as high school and as college students. The proportions of potential rural and primary care physicians among high ability high school students with science interests were estimated and found to be much higher than the proportions among qualified medical school applicants. Such applicants were not differentially eliminated in the process of selection into medical school. There is a need to concentrate efforts on altering the composition of the pool of medical school applicants, and these results can be used to help identify those most inclined to choose a general medical practice in a rural area.

RECORD NO. H503150 CATEGORY: HEALTH MANPOWER - PHYSICIAN BEHAVIOR

TITLE: Physicians' Specialty Choice and Specialty Wages

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
08-01-78	07-31-80	0	30,726	30,726

INVESTIGATOR NAME AND ADDRESS

HAY, JOEL W
UNIVERSITY OF SOUTHERN CALIFORNIA
UNIVERSITY PARK
LOS ANGELES
CALIFORNIA 90007

OBJECTIVE:
To develop and test empirical models of physician specialty choice in order to assess the relative importance of expected earnings in physicians' choice of specialty.

APPROACH:
A simultaneous equations model was developed to jointly estimate specialty income and the probability of selecting a given specialty. The purpose of this model was to eliminate a possible 'selectivity bias' embedded in prior empirical work which ignored simultaneity of the specialty-choice specialty-income relationship. The primary hypothesis to be tested is that specialty income has a positive effect on specialty choice. Data from the AMA Seventh Periodic Survey of Physicians were used to estimate the model.

FINDINGS:
Results indicate, contrary to prior research findings, that income is indeed a strong determinant of specialty choice. Also important to the specialty choice decision are age, sex, race, age at graduation from medical school, medical school ownership, country of medical school, and medical school research orientation.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03687 CATEGORY: HEALTH MANPOWER - PHYSICIAN BEHAVIOR

TITLE: Pediatrics: A Study of Professional Specialization

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	06-30-81	26,192	26,192	26,192	HALPERN, SYDNEY A UNIVERSITY OF CALIFORNIA BERKELEY BERKELEY CALIFORNIA 94720

OBJECTIVE:
To study the evolution of pediatrics in the U.S. from 1920 to the present. The investigation will focus on the process of professional specialization and the impact of this process on the delivery of health services to children. In addition to providing an analytic description of the organizational growth and consolidation of a medical specialty, the study will involve consideration of three hypotheses.

APPROACH:
The investigation will make use of a wide range of data including written documents and information obtained from consultants with expertise in the field of child health. Analytic methods used will be drawn from the field of historical sociology. Hypotheses focus on: (1) Built into pediatrics as it was institutionalized were certain tensions and strains regarding the nature of pediatrics as a field of interest and with requirements imposed by the emerging structure of specialization within medicine. These tensions resulted in major realignments in the specialty's orientation to the problems of child health. (2) investigation of changing patterns of collaboration between the Federal government and the specialty will reveal progressively greater influence on the part of organized pediatrics in determining national child health policy. (3) The unfolding dynamics of professional specialization in pediatrics and new forms in the specialty's partnership with the Federal government have had long-term documentable consequences for how services for children are organized.

FINDINGS:
The results will engender information useful in devising strategies for achieving a better balance among medical specialties. The study's analysis of the structure and politics of graduate medical education will provide new ideas among the optimal institutional locus of Federal intervention. Its account of the influence of child health programs on primary care training in pediatrics will assist in assessing the effectiveness of these types of Federal incentives.

RECORD NO. HS03704 CATEGORY: HEALTH MANPOWER - PHYSICIAN BEHAVIOR

TITLE: Physician Roles in Organizational Context

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-79	08-31-80	30,192	30,192	30,192

INVESTIGATOR NAME AND ADDRESS

MARSHALL, ROBERT J, JR
BROWN UNIVERSITY
BOX 1913,
PROVIDENCE
RHODE ISLAND 02912

OBJECTIVE:
To study the impact of self-selection versus practice organization on the attainment of specific professional roles among a national sample of American physicians.

APPROACH:
This study focuses on the attainment of specific professional roles among a national sample of 2821 American physicians who were studied from 1956 to 1976 by investigating: the degree to which role characteristics preferred by medical school seniors in 1960 are attained 16 years later, e.g., intellectual challenge, and patient contact. It looks at these preferences in the context of past and current practice organization, e.g., teamwork with other physicians, work pressure and prestige; the formal structure of the organizations the physician has been affiliated with; and the implications of differential role attainment on physician satisfaction and type of service provided. The data to be utilized comes from the Association of American Medical Colleges (AAMC) Longitudinal Study Data Bank.

FINDINGS:
This research emphasizes organizational affiliation as a factor influencing physicians' role attainment. The anticipated results as well as the conceptual approach are of considerable national interest in regard to medical education and practice.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03808 CATEGORY: HEALTH MANPOWER - PHYSICIAN BEHAVIOR

TITLE: Location of Physicians Specialists in Rural Areas

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-15-79	12-31-80	52,177	52,177	52,177

INVESTIGATOR NAME AND ADDRESS

WILLIAMS, ALBERT P
RAND CORPORATION
1700 MAIN ST
SANTA MONICA
CALIFORNIA 90406

OBJECTIVE:
To analyze data on the location of board certified specialists by town in 25 rural states for the period 1960-1977; to explore factors that are associated with the presence of a specialist in a town; and to estimate the effects of changes in the location of specialists on the distance the rural population must travel to receive speciality care.

APPROACH:
The Principal Investigators (P.I.'s) will utilize computerized data bases to determine characteristics associated with the migration of physicians from rural urban areas over a 17 year period in 25 rural states. Data such as the size and distribution of cities and towns larger than 2,500 population in each state and the location of urban population centers "cities over 25,000" utilizing census tracts will array physicians in population areas of both low and high density. The P.I.'s will utilize population grids and will prepare tabular presentations and plots to show the location of each type of specialist in each area for each year selected for study (1960, 1970 and 1977). Logistic regression will be used to estimate the probability that a specialist will locate in a town as a function of its size or other socio-demographic attributes. A computer program will calculate the distance of the non-urban population from the nearest specialist of each type.

FINDINGS:
This proposed project should shed some new light on the way in which board certified specialists have distributed themselves for the roughly 17 year period, how this distribution has altered the distance that non-urban dwellers must travel in order to reach a particular kind of specialist. The authors feel that on the basis of these findings and estimates of demand it might well be possible to make some crude predictions about how new specialists will distribute themselves during the next 5 to 10 years. Should these predictions suggest that specialists will be more widely distributed and travel time reduced to modest levels within the next few years, policy implications will certainly be significant. Also, should the matrix suggested prove workable, useful insight will also be derived from knowing whether the presence of any given type of physician in a community might serve as a predictor for the appearance of another type of specialist over a period of years. This then would enable the P.I.'s to anticipate the profile of specialists in various communities throughout the United States using this type of predictive methodology.

RECORD NO. HS03880 CATEGORY: HEALTH MANPOWER - PHYSICIAN BEHAVIOR

TITLE: Demarketing and Administrative Strategies in Drug Use

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	09-29-81	182,766	182,766	291,924

INVESTIGATOR NAME AND ADDRESS

AVORN, JEROME L
HARVARD UNIVERSITY

BOSTON
MASSACHUSETTS 02115

OBJECTIVE:
To study two means of influencing the appropriateness of physician prescribing: Through an administrative intervention performed by Medicaid on all physicians in Massachusetts, and through a personal intervention that they will execute in two other states. Both studies will use a Medicaid dataset for accurate measures of actual prescribing behavior.

APPROACH:
Evaluate the completed administrative intervention previously carried out by the Massachusetts Medicaid Program in Phase I of the study. In Phase II demarketing strategies are prepared using a rigorous research design with randomization to the following groups; control (no intervention), or combinations of four experimental interventions: a conventional fact sheet, an arresting series of "un-advertisements," advice on alternatives to using the target drugs, and contact by a professional representative. Before and after Medicaid records of prescribing data will be used to evaluate each component of this intervention as well.

FINDINGS:
Relevant finding resulting from Phase I research were incorporated into the intervention design for Phase II. The findings are as follows: Clinical efficacy and safety are more important determinants of drug product selection than cost. Cost may be increasingly important, however, in states with generic drug laws; the placebo effect and patient demands for a prescription drug are important influences on physicians in prescribing of the target drugs, particularly propoxyphene (Darvon, etc.); convenience (dosage pattern, etc.) for the patient and its positive relationship with compliance is an important factor in physician decision-making; personal communications with peers and detail people, and concise written communications from reputable sources are preferred by physicians over articles in scientific literature; visually and emotionally provocative images and headlines coupled with logical, rational copy are common elements in effective pharmaceutical advertisements. It is expected that the Phase II Educational Communication and personal intervention will improve prescribing behavior and improve the cost effectiveness of prescribing.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03918 CATEGORY: HEALTH MANPOWER - PHYSICIAN BEHAVIOR

TITLE: Pharmacokinetics Labs' Impact on M.D. Prescribing

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	01-30-81	49,025	49,025	49,025

INVESTIGATOR NAME AND ADDRESS

BEARDSLEY, ROBERT S
UNIVERSITY OF MARYLAND AT BALTIMORE
525 W REDWOOD ST
BALTIMORE
MARYLAND 21201

OBJECTIVE:
To evaluate the impact of physician prescribing and subsequent patient outcomes of conducting and feeding back analyses of blood samples from epileptic outpatients receiving anticonvulsant medications with respect to the absorption, distribution, excretion, and metabolism of drugs relative to their therapeutic or toxic effects.

APPROACH:
Retrospective data analysis will be carried out on a sample of approximately 200 patients seen at the Adult Seizure Clinic at the University of Maryland Hospital. Data will be collected concerning patient outcomes and physician prescribing on two groups of patients identified as: those patients treated prior to the initiation of Clinical Pharmacokinetics Laboratory (CPL) Services & those patients treated after initiation of services. The protocol is designed to test two hypotheses and will deal with the questions of what effect providing CPL test results have on physician prescribing and patient outcomes and what effect using CPL test results may have on patient outcomes. The outcomes to be reviewed include number of seizures, rehospitalizations, and toxic reactions.

FINDINGS:
Within the past ten years, the health discipline called Clinical Pharmacokinetics has emerged to assist clinicians in the therapeutic decision-making process. It is anticipated that this study will serve to objectively evaluate the impact and cost benefit of CPLs in patient management. It may also be possible to expand this service to other health care providers such as physicians assistants, nurse practitioners, and pharmacists who can order these tests in order to make better patient assessments.

RECORD NO. HS02038 CATEGORY: HEALTH MANPOWER - TRAINING

TITLE: Model for Criterion-Referenced Medical Specialty Test

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-77	09-29-82	0	312,826	652,182

INVESTIGATOR NAME AND ADDRESS

MAATSCH, JACK L
MICHIGAN STATE UNIVERSITY

EAST LANSING
MICHIGAN 48824

OBJECTIVE:
To develop and validate practical methods for improving the predictive validity of licensing and specialty certification examinations through one or more criterion measures of the quality of clinical performance in the practice setting.

APPROACH:
In the first two years of this grant the Specialty Board Examination for Emergency Medicine Physicians was developed and administered. It consisted of multiple choice questions, pictorials, patient management problems, and simulated patient encounters. The present study proposes to test whether there is a relationship between the scores of the candidates on each of these types of examinations and their actual practice. A pilot study on 100 candidates for the Board exam at 10 or more emergency departments in large urban hospitals will be done to test the methods and feasibility of a national study. The model includes test scores, the background of the physicians, patient characteristics and practice setting characteristics to produce the predictive validity of the quality of clinical performance. Actual performance will be measured by chart stimulated recall assessment, critical incident check list, independent chart audit, and other performance check lists. The chart stimulated recall assessment is a new method to be developed during this research.

FINDINGS:
If the pilot study proves feasible and a larger study is done the fourth year of this research, it could provide empirical data on: the reliablity and validity of specific measures of clinical performance that can be used for other specialities; cost-effective methods to improve the predictive validity of existing licensing and certification examinations; the predictive validity and utility of a specific, criterion-referenced specialty certification examination, each of its test formats, and the practice consequences of standards established for the examination; and the relative contribution of a number of background, setting, and practice variables to the quality of care provided patients visiting emergency departments.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03813 CATEGORY: HEALTH MANPOWER - TRAINING

TITLE: Computerized Prehospital Skill Development/Maintenance

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-01-79	08-31-81	222,000	222,000	470,514

INVESTIGATOR NAME AND ADDRESS

WOLFE, HARVEY
UNIVERSITY OF PITTSBURGH
4200 5TH AVE
PITTSBURGH
PENNSYLVANIA 15260

OBJECTIVE:
To develop a methodology and associated model that can be utilized in planning and monitoring the manpower skill requirements of the pre-hospital phase of an Emergency Medical Service (EMS) system.

APPROACH:
This research consists of four interrelated tasks. First, prehospital care algorithms and data collection systems already in place will be utilized to develop and test a model for determining prehospital care demand and skill requirements based on population characteristics. Second, data bases for monitoring prehospital care including specification of performance measures for paramedics. The final task will use census data and the output of the first three tasks to develop a model for projecting prehospital training requirements for a region.

FINDINGS:
The expected products of this research are a methodology for determining the skill requirements for prehospital care personnel given a specific service area and population at risk, and an evaluation of the extent of Emergency Medical Technicians prehospital skill decay under varying degrees of field experience and clinical service. This will have dual significance in that it will apply to immediate training expenditures for prehospital care personnel as well as long term policy decisions that are inherent in the allocation process.

RECORD NO. 233783015 CATEGORY: HEALTH MANPOWER - TRAINING

TITLE: Evaluation of Findings from Nurse Practitioner and Physician Assistant Studies

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-78	02-28-80	141,000	237,200	237,200

INVESTIGATOR NAME AND ADDRESS

ROMM, JOSEPH
SYSTEM SCIENCES, INC
4340 EAST-WEST HIGHWAY
BETHESDA
MARYLAND 20014

OBJECTIVE:
To provide an explicit and objective analysis of data collected in four national and up to five additional studies on nurse practitioners (NPs) and physician assistants (PAs). The analysis will assist the Department in arriving at decisions regarding what has been learned about NP/PA training and utilization and will delineate areas for future research.

APPROACH:
Data from nine studies on NPs and PAs were analyzed and synthesized, both independently and comparatively and related to research and policy issues identified in the 1975 and 1977 PE Work Group reports as well as issues identified by the contractor. An evaluation of the data from the nine studies were completed. Based on the above analysis and synthesis, recommendations were prepared for future research in the NP/PA field.

FINDINGS:
The nine studies contained a myriad of data, however, much of it dealt with questions tangentially, partially or inferentially. There is need for additional data, data structuring and/or analysis in a number of areas: PE reimbursement; patient perceptions of PE reimbursement and the level and quality of care; success/failure of PE's not retained by physicians/employers; effective demand for PE's; quality of care provided by PE's; role and performance of PE's; and deployment. If the future role of PE's is an important policy issue, a major research effort in the above areas is indicated.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02661 CATEGORY: HEALTH MANPOWER - NON-PROFESSIONAL HEALTH LABOR MARKET

TITLE: The Union Impact on Hospitals: A National Study

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-01-77	12-31-79	15,550	227,320	227,320	MILLER, RICHARD U UNIVERSITY OF WISCONSIN MADISON 500 LINCOLN DR MADISON WISCONSIN 53706

OBJECTIVE:
To assess the impact and role of unions on the administration of hospitals, labor costs, hospital labor markets and the price of hospital care.

APPROACH:
This study draws on a variety of data sources and analytical techniques to estimate the effects of hospital unions on wages. Data sources are the Current Population Survey, Bureau of Labor Statistics, Industry Wage Survey, National Mail Survey of hospitals, and interviews with representatives of unions, hospitals and labor relations agencies. The model of wage determination used, assumes wages of hospital workers are determined by unionism and the demand for labor with the supply of labor assumed exogenous. The analysis attempts to quantify the threat effect of unionization on wages in other parts of the labor market. Data focus is on the union effect on wages at the occupation, industry or individual's levels.

FINDINGS:
Collective bargaining in the hospital industry has had a small impact on the labor costs of hospital services. Only a small positive wage effect was attributable to the presence of a union in a hospital. Union impact at the individual worker level was modest with a union gain of 6 percent for nonprofessionals and 3 percent for nurses. Union and nonunion wages in a partially unionized market have risen by about 10 percent above the level they would in the absence of unionism. Unions had a small positive effects on the wages of nonprofessional workers in the private hospitals and no significant effect on the wages of professional workers in government hospitals. Union influence on hospital management practices outside of New York is modest focusing largely on scheduling. Interviews indicated unions may have reduced turnover through gains in wages and fringe benefits. The general conclusion is that collective bargaining is not a principal source of increased cost of hospital care.

RECORD NO. HS03014 CATEGORY: HEALTH MANPOWER - NON-PROFESSIONAL HEALTH LABOR MARKET

TITLE: Deployment and Career Trends of Physicians Assistants

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-78	12-31-80	21,457	37,475	40,989

INVESTIGATOR NAME AND ADDRESS

PERRY, HENRY B
MAINE MEDICAL CENTER
22 BRAMHALL ST
PORTLAND
MAINE 04102

OBJECTIVE:
To perform a trend analysis of the professional experience of physicians assistants (PAs) from 1974 to 1978.

APPROACH:
Data from the 1977 and 1978 surveys of physicians assistants conducted by the Association of Physicians Assistants Programs and American Academy of Physician Assistants will be examined to assess possible trends in employment and career patterns among physicians assistants since the comprehensive survey of the profession which was conducted in 1974. (Data are available on 73 percent of the PA profession as it existed at that time.) Physicians assistants' specialties, types of practices, geographic locations, post graduate education and income attainments, and rate of entry in fields of employment outside of the PA profession will be compared. Data will be analyzed using cross tabulation techniques supplemented by multi-variate techniques (such as path analysis).

FINDINGS:
New information is presented regarding the patterns of employment and career advancement which are emerging within the PA profession. A determination of the stability of patterns in choice of specialty, practice setting and geographical location is made. The potential of the present and future impact of PAs on the health care delivery system (e.g., their employment in urban hospitals as replacements for foreign medical graduates and surgical house staff) is made based on the data presented.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03649 CATEGORY: HEALTH MANPOWER - NON-PROFESSIONAL HEALTH LABOR MARKET

TITLE: Hospital Employees' Wage and Labor Union Organization

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-01-79	07-31-80	48,870	48,870	48,870

INVESTIGATOR NAME AND ADDRESS

FELDMAN, ROGER D
UNIVERSITY OF MINNESOTA OF MNPLS-ST PAUL

MINNEAPOLIS
MINNESOTA 55455

OBJECTIVE:
To determine the impact of unionism and collective bargaining on wages and wage structures in the hospital industry.

APPROACH:
This project will use probit simultaneous equations to account for the hypothesized joint relationship between wages and the extent of hospital unionization. Previous research (on) has failed to account for this interaction in developing estimates of wage impact. Data sources are a 1977 National Survey of Hospital Labor Markets and 1977 Current Population Survey. Wage equations will be estimated for RN's, LPN's, secretaries, and housekeeping employees from the hospital survey for unionized and nonunionized hospitals. A probit equation will be estimated relating union status to region as well as union-nonunion wage differentials. This probit equation will be used to adjust errors in the wage equations for union and non-union hospitals. The analysis will be repeated using the Current Population Survey data. Appended to the report is a user's manual for operating the truncated variables program (TVP) used in the statistical analysis.

FINDINGS:
Data from the hospital survey indicated that hospital unions raise wages by 3.40 percent for RNs, 5.61 percent for LPNs, 7.43 percent for office clerical workers and 7.85 percent for service and maintenance employees. Using Current Population Survey data, this study found unions increase wages for all occupations except for nurses. The effect of 1974 Taft-Hartley Amendments on the spread of hospital unionism in non-profit hospitals is quite small with only three percent of all hospitals unionized as a consequence of the 1974 Amendment. The union wage effect reduces inequality in wages among organized workers, but increases inequality between organized and unorganized workers. The overall impact of unions on wage inequality depends on which effect is stronger.

RECORD NO. HS02790 CATEGORY: HEALTH MANPOWER - MANPOWER REQUIREMENTS

TITLE: Assessing the Adequacy of Health Manpower Supply

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-01-78	05-31-80	49,737	138,062	147,370	HADLEY, JACK L URBAN INSTITUTE 2100 M ST NW WASHINGTON DISTRICT OF COLUMBIA 20037

OBJECTIVE:
To develop a method for assessing the adequacy of health manpower supply and to examine its distribution.

APPROACH:
The adequacy of health manpower supply will be assessed in terms of the incremental contribution to improved health. The incremental contribution, or marginal product, will be computed from the parameters of statistical relationships between various mortality rates and four sets of factors: medical care, life-style, environment, and personal characteristics. The criterion for assessing health manpower supply takes account of other medical care resources, current values of the health indicator, and the other factors which affect health. Multivariate regressions using several data sources, including the U.S. Vital Statistics, the Public Use File of the 1970 Census, and the Area Resource File, will be estimated. The estimation analysis will focus primarily on the role of medical care in explaining geographic variations in mortality rates. The required manpower distributions based on the criteria described in the proposal will be computed.

FINDINGS:
Comparisons between actual and desired manpower distributions will provide information on the apparent maldistribution of physicians and the adequacy of the overall physician supply.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02916 CATEGORY: HEALTH MANPOWER - MANPOWER REQUIREMENTS

TITLE: The Impact of FMGs on Metropolitan Areas of the U.S.

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
01-01-78	12-31-79	22,377	58,958	58,958	DEWEY, DONALD DE PAUL UNIVERSITY 25 E JACKSON BLVD CHICAGO ILLINOIS 60604

OBJECTIVE:
To describe and analyze the geographic location and demographic characteristics of Foreign Medical Graduates (FMGs) within the Chicago Metropolitan area over the 25 year period, 1950-1975.

APPROACH:
This analysis will trace the rise in total FMGs and their locational pattern within the metropolitan Chicago area using 1950, 1960, and 1970 tapes from the American Medical Association and community data from the Bureau of Census. Data on FMGs for 1974 will also be examined. Detailed information and analysis of FMGs (the geographical distribution, country of graduation, type of practice, specialty and age characteristics) will be provided. Distributional patterns to be examined include the metropolitan area, city versus suburbs, concentric zones and radial sectors emanating from the Central Business District, and urban neighborhoods and suburban municipalities. Comparisons will be made with statewide (Illinois) and national patterns.

FINDINGS:
P.L. 94-484 sharply curtailed the number of new FMGs permitted to practice in the U.S. While the law has been amended to postpone this curtailment until 1980, there is a need for data to assess its potential impact. This study shows that the inner city is very dependent on FMGs for health services at hospitals. Findings indicate that FMGs, like American graduates, leave the inner city for the suburbs as soon as they complete their hospital training, especially for areas where there is less competition from physicians trained in the United States. There has been a decrease in the number of doctors serving Chicago's poor and black neighborhoods. There were 20 physicians (including both American and FMGs) for every 100,000 residents of black communities in 1970; by 1974 the number was 17. Moreover, with regard to office practices, there is a notable contrast between FMGs established in Chicago's predominantly black neighborhoods and those in the suburbs.

RECORD NO. HS01964 CATEGORY: HEALTH SERVICES RESEARCH CENTERS - HEALTH SERVICES RESEARCH CENTERS

TITLE: Health Services Research and Development Center

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
03-01-76	05-31-81	524,550	1,642,050	1,898,717	SHAPIRO, SAM JOHNS HOPKINS UNIVERSITY CHARLES AND 34TH STS BALTIMORE MARYLAND 21218

OBJECTIVE:
To conduct health services research and analyses. The Center is concerned with the identification of characteristics of delivery systems, providers, population, and community that affect the economics, accessibility, utilization, and quality of care; and with the assessment of the relative significance of these characteristics.

APPROACH:
The Center utilizes NCHSR "core" funding to support administrative costs of the Center and a multidisciplinary staff. Other sources of support are sought for specific projects. The Center carries on a program of technical assistance; disseminates research findings through refereed journals and a periodic newsletter; offers educational opportunities to students and practitioners, and conducts research.

FINDINGS:
The Center is one of a group mandated by Public Law 93-353. The Center conducts an independent program of research that reflects regionalized needs to a significant degree. The Center offers proximity, knowledge of regionalized concerns, and responsiveness to a localized constituency. Examples of projects are a study of the role of public service employment in the health field (CETA in the Baltimore area), a manpower and utilization study of the Columbia Medical Plan, the effects of health education on hypertension, and a program of research on emergency medical services.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS01971 CATEGORY: HEALTH SERVICES RESEARCH CENTERS - HEALTH SERVICES RESEARCH CENTERS

TITLE: Core Support for Health Services Research Center

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
02-16-76	08-15-81	482,342	1,484,535	1,735,205

INVESTIGATOR NAME AND ADDRESS

DE FRIESE, GORDON H
UNIVERSITY OF NORTH CAROLINA CHAPEL HILL

CHAPEL HILL
NORTH CAROLINA 27514

OBJECTIVE:
To conduct health services research and analyses. Emphasis is given to research on primary care issues as they affect needs of the Southeastern Region of the United States. Dental manpower needs, rural health, and health promotion are of a particular concern to the Center.

APPROACH:
The Center utilizes NCHSR "core" funding to support its administrative costs and a multidisciplinary staff. Other sources of support are sought for specific projects. The Center carries on a program of technical assistance; disseminates research findings through refereed journals and Center-published newsletter; offers educational opportunities to students and practitioners; and conducts research activities.

FINDINGS:
The Center is one of a group mandated by Public Law 93-353. The Center conducts an independent program of research that reflects regionalized needs to a significant degree. It offers proximity, knowledge of regionalized concerns, and responsiveness to a localized constituency. Examples of policy-oriented projects include the evaluation of a national program of disease prevention and health promotion, and a long-term evaluation of alternative forms of providing primary care to rural residents.

RECORD NO. HS01978 CATEGORY: HEALTH SERVICES RESEARCH CENTERS - HEALTH SERVICES RESEARCH CENTERS

TITLE: Health Services Research Center Support

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-16-76	08-31-81	487,660	1,507,016	1,726,447	SHORTELL, STEPHEN M UNIVERSITY OF WASHINGTON SEATTLE WASHINGTON 98195

OBJECTIVE:
To conduct health services research and analyses for health care decision-makers. Emphasis is placed upon health manpower research, planning and regulatory issues, public expenditures, and evaluation of alternative delivery systems.

APPROACH:
The Center utilizes NCHSR "core" funding to support administrative costs of the Center and a multidisciplinary staff. Other sources of support are sought for specific projects. The Center carries on an active program of technical assistance; disseminates research findings through refereed journals, Center newsletters, and a Policy Research Series; offers educational opportunities to students and practitioners; and conducts research activities.

FINDINGS:
The Center conducts an independent program of research that reflects regionalized needs to a significant degree. The Center offers proximity, knowledge of regionalized concerns, and responsiveness to a localized constituency. Examples of policy-oriented efforts include studies of the financial viability of National Health Services Corps physicians in the Northwest, and the use of the Medical Management Information System in Washington State to determine numbers of Medicaid eligibles and their utilization patterns. The Center is one of a group mandated by P.L. 93-353.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02015 CATEGORY: HEALTH SERVICES RESEARCH CENTERS - HEALTH SERVICES RESEARCH CENTERS

TITLE: A Health Services Research Center

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
02-16-76	07-31-81	395,108	1,276,743	1,390,271

INVESTIGATOR NAME AND ADDRESS

ROEMER, RUTH
UNIVERSITY OF CALIFORNIA LOS ANGELES
405 HILGARD AVE
LOS ANGELES
CALIFORNIA 90024

OBJECTIVE:
To conduct health services research and analyses. The Center conducts an expanding program of research which has emphasized inquiries into the impact of involving individuals in the process of their own health care as a means of altering health-related behaviors in order to achieve more optimal outcome.

APPROACH:
The Center utilizes NCHSR "core" funding to support administrative costs of the Center and a multidisciplinary staff. Other sources of support are sought for specific projects. The Center carries on a program of technical assistance; disseminates research findings through refereed journals and a periodic newsletter; offers educational opportunities to students and practitioners; and conducts research activities.

FINDINGS:
The Center conducts an independent program of research that reflects regionalized needs to a significant degree. The Center offers proximity, knowledge of regionalized concerns, and responsiveness to a localized constituency. Activities include a study of child-initiated care in a local school district, the development of a health education curriculum, a methodological study of assessment of health care attitudes, and the use of contracts to influence patient compliance. The Center is also expanding its research activities to include long-term care and publicly-supported health policies. The Center is one of a group mandated by Public Law 93-353.

RECORD NO. HS02569 CATEGORY: HEALTH SERVICES RESEARCH CENTERS - HEALTH SERVICES RESEARCH CENTERS

TITLE: Health Care Technology Center

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
10-01-76	09-29-80	713,063	2,498,226	2,498,226

INVESTIGATOR NAME AND ADDRESS

LINDBERG, DONALD A
UNIVERSITY OF MISSOURI COLUMBIA

COLUMBIA
MISSOURI 65201

OBJECTIVE:
To undertake a national-level program by which special expertise from within and outside the University of Missouri measures the impact of technology on health services delivery and on analyzing societal alternatives with regard to its use. The Center also addresses developmental aspects of technology.

APPROACH:
The Center is awarded "core" support for administrative costs and a multidisciplinary staff, addressing a broad scope of health services research. An additional amount is awarded for specific projects in the area of special emphasis: health care technology. On the latter issue, the Center serves as a National rather than merely regionalized resource. The Center excercises its mandate to deliver technical assistance, disseminate its research findings through printed media, offer educational opportunities, and conduct health services research.

FINDINGS:
The Health Care Technology Center is specifically mandated by Public Law 93-353. It is currently undertaking research and development in e.g., the uses of computerized tomography, special applications of new configurations and uses for drug information services, and microprocessors.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02577 CATEGORY: HEALTH SERVICES RESEARCH CENTERS - HEALTH SERVICES RESEARCH CENTERS

TITLE: Health Care Management Center

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
10-01-76	03-31-82	1,311,649	3,264,245	4,633,745	PIERSKALLA, WILLIAM P UNIVERSITY OF PENNSYLVANIA PHILADELPHIA PENNSYLVANIA 19104

OBJECTIVE:
To carry out a National program of research aimed at the organization and management of health services and the training of administrators, through the use of a multidisciplinary group of researchers and support staff.

APPROACH:
The Center is awarded "core" support for administrative costs and a multidisciplinary staff, addressing a broad scope of health services research. An additional amount is awarded for specific projects in the area of special emphasis| health care management research. On the latter issue, the Center delivers technical assistance, disseminates its findings through refereed journals, offers educational opportunities in heath care management and related research, and conducts health services research.

FINDINGS:
The Health Care Management Center is specifically mandated by Public Law 93-353. Examples of policy-relevant research projects are: A study of hospitals' cooperation and competition, a methodology for projecting HMO enrollment, a methodology for allocating perinatal health services resources, factors influencing physician overutilization of laboratory tests, the management of dental care resources, and methods of improving the relationship between planning and control systems in health institutions.

RECORD NO. HS02975 CATEGORY: HEALTH SERVICES RESEARCH CENTERS - HEALTH SERVICES RESEARCH CENTERS

TITLE: Health Services Policy Analysis Center

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
11-01-77	10-31-82	687,578	1,319,630	2,468,497

INVESTIGATOR NAME AND ADDRESS

LEE, PHILLIP R
UNIVERSITY OF CALIFORNIA SAN FRANCISCO

SAN FRANCISCO
CALIFORNIA 94143

OBJECTIVE:
The Policy Analysis Center is organized to provide assistance to health policymakers at the Federal level in a manner which brings the results of health services research to bear on specific policy questions. The Center focuses on the development and evaluation of national policies relating to health services, including the development of health maintenance organizations and other forms of group practice, with a view toward improving the efficiency of the health care delivery system.

APPROACH:
The Center is awarded funds to support both its administrative costs and the costs of specific projects. Its scope of effort is national rather than local, and its program of technical assistance involves the use of a Washington, D.C. office as well as the base office at UCSF. Dissemination of findings is through solicited technical assistance efforts and through Congressional testimony, publications in refereed journals, conferences, and the mass media.

FINDINGS:
The Center is mandated by HMO amendments to NCHSR legislation (P.L. 93-353 as amended by P.L. 94-460). It is expected that the Center will bring research more directly to bear on Congressional initiatives in health, and specifically in the area of health maintenance organizations. Areas of Congressional advice include e.g., prescription drugs, health manpower, regulation and planning, medical technology, long term care of the elderly, health microeconomics, and health maintenance organizations.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02563 CATEGORY: LONG TERM CARE - COMPREHENSIVE SERVICES PLANNING

TITLE: Triage: Coordinated Delivery of Services to the Elderly

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
04-01-76	05-30-80	0	1,248,032	1,248,032

INVESTIGATOR NAME AND ADDRESS

SHEALY, MARIN
CONNECTICUT STATE DEPARTMENT ON AGING
90 WASHINGTON ST
HARTFORD
CONNECTICUT 06115

OBJECTIVE:
To evaluate a model system of health and social care for the elderly.

APPROACH:
"Triage" is a system developed by the Connecticut State Department of Aging to assure referral and follow-up for all physical, social, psychological and life support needs for clients by a single-entry process. A comparative analysis will be performed between "Triage" clients and a sample drawn from the existing care system, stratifying by sex, age, marital status, and activity in daily living scores. In addition, the grantee will compile a descriptive study of "Triage."

FINDINGS:
It is expected that the analysis will show that "Triage" clients will have better functional status outcomes, lower per capita health care expenditures and fewer days of institutionalization than those in the control group. Thus the quality of care would be increased while costs are contained.

RECORD NO. H502693 CATEGORY: LONG TERM CARE - COMPREHENSIVE SERVICES PLANNING

TITLE: Experimental Transportation for Elderly and Disabled

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-77	12-31-79	0	335,699	335,699	SIMMEL, ARNOLD VERA INSTITUTE OF JUSTICE 30 E 39TH ST NEW YORK NEW YORK 10016

OBJECTIVE:
To evaluate a multi-purpose transportation system for the elderly and disabled for impact on mobility, relationship with other provider agencies and cost-effectiveness.

APPROACH:
The grantee will compare demographic factors, patterns of tripmaking, degree of functional incapacity and mental well-being of a sample of elderly and disabled persons having access to the experimental system with a matched group. Personal interviews will be conducted, validated by examination of secondary data sources.

FINDINGS:
Evaluation of the experimental system is expected to show greater mobility among the users and a movement toward positive mental health. In addition, an increase in trips to physicians and out-patient facilities is predicted with a corresponding reduction in emergency room visits, hospitalizations and lengths of hospitalization.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02712 CATEGORY: LONG TERM CARE - COMPREHENSIVE SERVICES PLANNING

TITLE: Health Status, Household, and Community Integration

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-77	08-31-80	0	297,806	297,806	RUSHING, WILLIAM A VANDERBILT UNIVERSITY NASHVILLE TENNESSEE 37240

OBJECTIVE:
To discover whether and how chronic illness in a member of a household affects the behavior of other members of the family in such areas as labor force participation and community interaction.

APPROACH:
Respondents from approximately 800 households with an illness-caused disability will be interviewed and compared with the same number of respondents from households with no disabled members. Disability is measured by a functional status index previously developed and found to be reliable. The data will be appropriate for sophisticated statistical analysis.

FINDINGS:
There have been surprising few studies of the socially deleterious effects of chronic illness. The information derived from studies such as this are important for the development of public programs and social support systems to deal with the increasing prevalence of chronic disease.

RECORD NO. HS02818 CATEGORY: LONG TERM CARE - COMPREHENSIVE SERVICES PLANNING

TITLE: Economic Responses to Poor Health in Older Males

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-15-77	12-31-79	0	139,797	139,797

INVESTIGATOR NAME AND ADDRESS

PARSONS, DONALD O
OHIO STATE UNIVERSITY

COLUMBUS
OHIO 43210

OBJECTIVE:
To examine the impact of poor health of older males on a wide variety of labor market activities.

APPROACH:
Models were developed for estimating the effect of poor health on male labor supply, wage rates, spouse labor supply and asset adjustment. The study is based on data from the National Longitudinal Survey on non-institutionalized males ages 45-59, conducted in 1966, 1967, 1971, 1973, 1975, and 1976. Measures of health status are available through (1) state of health and (2) more detailed questions on functional status.

FINDINGS:
The analysis emphasizes the substantial economic losses suffered by older males in poor health and the limited ability of the family to adapt. A major finding is that the size of the welfare recipient population is dependent upon the generosity of transfers, for both Social Security disability and AFDC. Also it was found that wives generally do not adjust their labor market activities to increase earned income.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03760 CATEGORY: LONG TERM CARE - COMPREHENSIVE SERVICES PLANNING

TITLE: A Data Archive for Use in Long-Term Care Policy Analysis

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-81	152,376	152,376	308,642	KATZ, SIDNEY MICHIGAN STATE UNIVERSITY EAST LANSING MICHIGAN 48824

OBJECTIVE:
To develop a unique type of archive of long-term care information and test its utility in selected policy analysis; a concomitant objective is to contribute to methodologic improvement of data archiving and secondary analysis.

APPROACH:
The project will acquire selected data sets from completed long term care studies; evaluate the suitability of the data for the archive; index and transform the data to make it compatible with other data. A unique requirement for inclusion of the data set is that it must describe 1)the needs of populations in terms of their health status; 2)amounts of changes in health during given periods of time; 3) impacts of services. Five data sets have already been screened as suitable and seven more are under consideration. It is suggested that perhaps 30 or 40 studies will be eventually analyzed. Six interlocking goals have been outlined with the methodology for attaining them: 1) refine information in the archive; 2) refine procedures for identifying priority policy issues and analysis questions; 3) refine supports for implementation of policy analysis; 4) demonstrate use of the archive in policy analyses; 5) conduct secondary studies of program evaluation; 6)develop background information useful in formulating analytic plans for policy studies. A plan for external evaluation of the products will be implemented.

FINDINGS:
Significant products of this project will be its technical contributions to knowledge about archiving and integrating multiple sets of time-series data in the long term care field, as well as the process of secondary analysis of such data for policy evaluation purposes. The project will provide an improved base of information available for the continuous development and implementation of public directions in long-term care--contributing to decisions about long-term care needs and about cost-effectiveness. The data archive will be in place and will contain carefully selected long-term care studies and a data base ready for secondary analysis. Such data will also be accessible to other policy researchers and analysts. Analytic models which have been developed, used, and refined will be ready for direct application. The analytic models will represent logical and improved extensions of current approaches in the study and analysis of information. Preliminary policy position papers will have been developed, including findings of policy analysis studies relative to improved approaches for quality assurance, improved information for health planning guidelines, and the organization of long-term care.

RECORD NO. HS03824 CATEGORY: LONG TERM CARE - COMPREHENSIVE SERVICES PLANNING

TITLE: Health Care Services Utilization Among Older Americans

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	02-28-81	35,252	35,252	35,252

INVESTIGATOR NAME AND ADDRESS

EVE, SUSAN B
NORTH TEXAS STATE UNIVERSITY

DENTON
TEXAS 76203

OBJECTIVE:
To identify those demographic, social, and economic factors which affect the use of health care services by older adults. A particular focus of this research is to assess the applicability of the Anderson and Newman Model, developed in 1973, to predict the use of health care services according to specific characteristics of any given population.

APPROACH:
The types of health care providers on which this research will focus are physicians, dentists, hospitals, nursing homes, and health maintenance organizations. Information on approximately 21,287 older adults is available for this study. Secondary data analysis will be performed on data gathered in 1975 by the National Health Interview Survey. Only data on adults 65 years and older will be analyzed using multivariate analysis which will include AID 3 analysis (a procedure designed to find interaction among variables) and multiple classification analysis.

FINDINGS:
The study sample consists of a national probability sample of older adults, increasing the generalizability of the results to the older population. This project provides an opportunity to continue the process of modifying and improving predictive models of the use of health services by the elderly. Health care planning and cost containment strategies demand as accurate a prediction model as possible with regard to this population.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 230760308 CATEGORY: LONG TERM CARE - COMPREHENSIVE SERVICES PLANNING

TITLE: P.L. 92-603, Sec 222, Day Hosp Experiment Eval

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-76	08-29-80	0	121,269	121,269	CLEARY, JOHN NEW YORK CITY HEALTH & HOSPITALS CORP 125 WORTH STREET NEW YORK NEW YORK 10013

OBJECTIVE:
To enable delivery of, and reimbursement for, the required health care services in a Day Hospital setting so that the intended evaluation research under Grant HS-01043 to the Albert Einstein College of Medicine can be carried out.

APPROACH:
The services to be evaluated in a Day Hospital for Rehabilitation Medicine must be provided by a Certified Medicare Provider of Service, in this instance, the New York City Health and Hospital Corporation (NYCHHS). Reimbursement for services is made by the Medicare Bureau Health Care Financing Administration in accordance with waivers of Medicare regulations made possible by means of this contract. The NYCHHC is a public service entity that manages 19 municipal hospital/medical centers for the city of New York, among which is the Bronx Municipal Hospital Center where the Day Hospital services are to be delivered.

FINDINGS:
No findings are expected under this contract. This contract is an enabling legal instrument that links to the Grant HS-01043 titled "Day Hospital Service in Rehabilitation Medicine." Any policy relevant findings will result from the evaluation research being conducted under the grant awarded to the Albert Einstein College of Medicine.

RECORD NO. 233793020 CATEGORY: LONG TERM CARE - COMPREHENSIVE SERVICES PLANNING

TITLE: Review and Analysis of Factors Influencing the Deinstitutionalization of the Mentally Ill

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	03-29-81	225,344	225,344	225,344

INVESTIGATOR NAME AND ADDRESS

CICCHINELLI, LOUIS
UNIVERSITY OF DENVER

DENVER
COLORADO 80208

OBJECTIVE:
To review and evaluate studies and data on the care and services provided to the deinstitutionalized chronically mentally ill; to develop a descriptive model of the deinstitutionalization process and to suggest a research agenda to fill gaps in existing studies.

APPROACH:
This research will develop a state of the art information base on the deinstitutionalization of the mentally ill to community based facilities by reviewing the epidemiology of this population, the appropriateness of placement, the quality of care provided in mental hospitals, nursing homes, and other settings, the relative costs of treatment, and the effect of funding on placement and quality of care. Emphasis is on beneficiaries of Medicare, Medicaid, and Federal and state-supported programs with special reference to nursing home residents. Information sources include available and ongoing studies of deinstitutionalization, analysis of existing national, state and local sources as well as discussion with experts on long term care alternatives and programs for the mentally ill. The deinstitutionalization system model to be developed will integrate the effects of reimbursement, political, and legal factors on placement and supply of facilities as well as on the appropriateness of care received in alternative facilites.

FINDINGS:
Nursing homes are widely used as a resource for the mentally ill with the growth of deinstitutionalization away from State mental hospitals over the last twenty years. There is increasing evidence that the goal of deinstitutionalization to provide community-based care meeting the psychosocial needs of the mentally ill is not being met in nursing homes. Analysis of the 1977 National Nursing Home Survey found that of 1.3 million residents, approximately 60.6 percent had one or more mental impairments or conditions. Mentally ill residents in nursing homes are different from physically ill; they are younger, less able to communicate and exhibit more behavior problems both nationally and in the five States of analysis: California, Illinois, Massachusetts, New York, and Texas. Mentally ill residents in nursing homes have greater lengths of stay and remain in the health system longer than physically ill residents. Analysis of State studies reveal inadequate staff training, and few programs addressing the mental health services needs of nursing home residents. There is need for additional research on patient outcomes in order to adequately assess appropriateness of placement of mentally ill in nursing homes.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02510 CATEGORY: LONG TERM CARE - INSTITUTIONAL SERVICES

TITLE: An Empirical Basis for Nursing Home Meal Service

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-30-76	12-31-79	0	271,605	271,605

INVESTIGATOR NAME AND ADDRESS

RISLEY, TODD R
UNIVERSITY OF KANSAS

LAWRENCE
KANSAS 66045

OBJECTIVE:
To study the dietary habits of residents of a nursing home in an effort to identify ways to improve the nutrition of the elderly.

APPROACH:
The researcher will look at and experiment with various methods for improving food item choices, dining conditions and assistance with feeding which will provide the residents of a 100-bed skilled nursing facility with the recommended dietary allowance of nutrients.

FINDINGS:
Sample menus will be written and recommendations will be provided on how to improve nutrition to these elderly persons. If specific methods for improving nutritional intake of the elderly prove useful, these may be implemented in other nursing homes and given to caretakers of the non-institutionalized elderly in an effort to improve the health status of the elderly possibly reducing the cost of health care through prevention of dietary deficiency diseases.

RECORD NO. HS02675 CATEGORY: LONG TERM CARE - INSTITUTIONAL SERVICES

TITLE: Economics of Nursing Homes: Ownership and Financing

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
05-01-77	04-30-80	0	95,749	95,749

INVESTIGATOR NAME AND ADDRESS

GINSBURG, PAUL B
DUKE UNIVERSITY

DURHAM
NORTH CAROLINA 27706

OBJECTIVE:
To study the determinants of cost variation among nursing homes, emphasizing the effect of ownership and reimbursement systems on efficiency.

APPROACH:
The theoretical basis for this study is the application of the property rights theory of the firm to nursing homes. This theory predicts: decision-makers of nonprofit and government nursing homes will be less efficient than decision-makers in profit-oriented homes where flat reimbursement systems prevail; cost-based reimbursement systems will lead to higher costs. The data base for this analysis is the 1973-74 National Nursing Home Survey. The study sample was limited to nursing homes in Standard Metropolitan Statistical Areas and homes certified for Medicaid. Regression analysis and cost functions were used with the dependent variable, total operating expenses, and independent variables included firm ownership, type of Medicaid reimbursement system, input prices, output and variables standardized for patient debility and for services provided.

FINDINGS:
Findings to date indicate that within the nursing home industry, nonprofit firms have higher costs than for-profit firms, with a substantial part of the difference probably related to efficiency. Within the non-profit sector, government owned firms have higher costs than private firms. Ownership differences are greater in states using flat-rate methods of reimbursement. Pure cost reimbursement without ceilings is associated with substantially higher costs than flat rate reimbursement.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03275 CATEGORY: LONG TERM CARE - INSTITUTIONAL SERVICES

TITLE: Prognosing the Course of Nursing Home Patients

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	01-31-82	349,971	349,971	663,702	KANE, ROBERT L RAND CORPORATION 1700 MAIN ST SANTA MONICA CALIFORNIA 90406

OBJECTIVE:
To develop and test a means of predicting the expected course of illness of nursing home patients and expected health outcome based upon initial and periodic assessment of patient health status. It will test the strategy by which the assessment data at one time is used to predict the status at another point in time.

APPROACH:
The study will utilize a series of repeated observations by a multi-disciplinary team comprising physician, nurse, and social worker on approximately 500 patients drawn from five nursing homes.
The team will gather data and develop prognoses on each patient as to the level of functioning they expect to find in the patient three months hence, and compare these to actual patient outcomes. The prognostic process involving the complex physiological, and social factors inherent in nursing home patients will be modeled mathematically, fitting subjective judgements with objectively collected data. The evaluation three months later checks the accuracy of the prior prognosis and becomes the baseline for a new prognosis for the next three months. Clues derived from one iteration will be tested in subsequent rounds. Finally, a unidimensional scale of outcome predictors will be developed from the multiple components of outcomes identified in the process.

FINDINGS:
This study could lead to better understanding of the complex mix of health and social impairments of the chronically ill in nursing homes, particularly the aging. It could open the way for developing a system for reimbursement on the basis of achieving predicted outcomes; it could provide a basis for comparing various forms of long-term care in the absence of more rigorous randomized trials; it could offer a rare set of longitudinal data on a corps of nursing home patients, yielding useful information about what types of change over time one might realistically expect.

RECORD NO. HS03333 CATEGORY: LONG TERM CARE - INSTITUTIONAL SERVICES

TITLE: The Effects of Reimbursement on Nursing Home Services

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
08-01-78	12-31-79	0	33,270	33,270

INVESTIGATOR NAME AND ADDRESS

MORRISEY, MICHAEL A
BATTELLE MEMORIAL INSTITUTE
4000 41ST ST NE
SEATTLE
WASHINGTON 98105

OBJECTIVE:
To analyze the impact of alternative Medicaid reimbursement systems on the scope of services offered and the patient mix in nursing homes.

APPROACH:
This dissertation grant will analyze selected Medicaid long-term care reimbursement policies, licensure requirements and related regulations to identify those elements that may affect the delivery of long-term care services. Based on this, the implications of the policies on the scope of services provided and the composition of residents by funding source will be empirically examined using appropriate econometric techniques. Secondary data sources such as the 1973-1974 National Nursing Home Survey and information on reimbursement systems in effect in the various States as reported by Applied Management Sciences in their study of reimbursement systems for Long Term Care in 1976 will be used.

FINDINGS:
The expected results of this analysis will aid in the development of reimbursement programs that are in accordance with general nursing home service policy. It will also provide information on regulations and the influence they have on the particular reimbursement systems. Because specific regulations will vary across States it is likely that legislation appropriate in one State will exacerbate problems in another State and therefore it is important to understand the degree of influence the reimbursement schemes may have on services.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS01043 CATEGORY: LONG TERM CARE - HOME AND COMMUNITY SERVICES

TITLE: Day Hospital Service in Rehabilitation

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-30-74	08-31-80	0	946,277	946,277	CUMMINGS, VICTOR YESHIVA UNIVERSITY 500 W 185TH ST NEW YORK NEW YORK 10033

OBJECTIVE:
To determine the feasibility of operating a day hospital service in the Department of Rehabilitation Medicine of a large urban hospital serving a primarily disadvantaged population.

APPROACH:
The grantee will randomly select 200 patients from a pool of hospital-eligible, seriously disabled adults and match them with 200 hospitalized patients. These groups will be evaluated on cost and medical and psycho-social functioning bases at time of discharge and nine months subsequent to discharge.

FINDINGS:
It is expected that day hospital service will result in a substantial reduction in medical care costs as compared to traditional inpatient services while proving to be just as effective in terms of medical, psychological and social criteria.

RECORD NO. HS02627 CATEGORY: LONG TERM CARE - HOME AND COMMUNITY SERVICES

TITLE: The Family and Long Term Care

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
04-01-77	03-31-80	47,861	300,293	300,293

INVESTIGATOR NAME AND ADDRESS

HOLLISTER, A C
CALIFORNIA STATE DEPARTMENT OF HEALTH
2151 BERKELEY WAY
BERKELEY
CALIFORNIA 94704

OBJECTIVE:
To examine the effects of family structure on the probability of being placed in an institution which provides long term care as opposed to receiving home care.

APPROACH:
This project utilizes data from two efforts, an initial survey conducted in 1965 and a follow-up in 1974. From this longitudinal study one sample will be drawn to investigate the influences of placement in a long term care facility and a second sample of disabled persons living at home drawn to describe the formal and informal home care received.

FINDINGS:
This study will provide important information on the factors that determine delivery of home care from formal and informal sources and the impact of home care on informal care providers.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03030 CATEGORY: LONG TERM CARE - HOME AND COMMUNITY SERVICES

TITLE: Randomized Trial of a New Team Approach to Home Care

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-79	06-30-82	137,813	137,813	421,425	GROTH-JUNCKER, ANNEMARIE UNIVERSITY OF ROCHESTER RIVER CAMPUS STA ROCHESTER NEW YORK 14627

OBJECTIVE:
To evaluate the impact of a newly developed physician-nurse practitioner-social worker team approach to home care for patients with chronic or terminal illness who wish to receive care at home rather than in an institution.

APPROACH:
Project is based in the Ambulatory Care Unit of the Department of Medicine, University of Rochester Medical Center and works closely with the Visiting Nurse Association of Monroe County. The program includes 24-hour telephone service by team members and home visits by the physician, as required; and emphasizes supportive care by family and friends. Patients who meet the intake criteria including informed consent will be stratified into two strata: cancer and non-cancer patients each of which will be randomly allocated to experimental and control groups. Both groups will receive the usual range of community services. Data on approximately 240 patients will be collected at three month intervals by trained non-health professional surveyors not involved with the service program. The research will be kept separate from the service program. The data analysis will include comparisons of service utilization and costs of services. Analysis will also include comparisons of patient morale and functional status as well as both patient and family satisfaction with medical care.

FINDINGS:
The major significance of the project is the evaluation of a Team Approach to Primary Care in the Home as an alternative for terminally or chronically ill and homebound patients who wish to remain in their homes. The expected outcome will be reduced cost for care through a reduction in emergency room evaluations and hastily arranged for, often inappropriate acute care hospital admissions, better psychosocial functioning at home with good support services, more satisfaction with care at this critical phase of life, and longer or equal survival time as compared to receiving conventional care at home or in an institution. This project will have additional methodologic contributions to make. It will describe the relationship of changes over time in the Sickness Impact Profile (SIP) with changes over time in morale and satisfaction. It will also compare patient and surrogate SIP scores for a sub-sample of patients. Development of the satisfaction and bereavement instruments will be important with upcoming emphasis on evaluation of long-term and terminal care. A work sampling study of the Team will describe and define the intervention so that Teams can be replicated. Indirectly, this project demonstrates a variation of hospice type care.

RECORD NO: H505192 CATEGORY: LONG TERM CARE - HOME AND COMMUNITY SERVICES

TITLE: Evaluation of a Comprehensive Home Care Program for the Elderly

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-78	06-30-80	3,348	35,003	35,003

INVESTIGATOR NAME AND ADDRESS

HUGHES, SUSAN L
NORTHWESTERN UNIVERSITY

EVANSTON
ILLINOIS 60201

OBJECTIVE:
To evaluate the effectiveness of a newly established comprehensive, community based, and hospital linked Home Care program called the Five Hospital Homebound Elderly Program.

APPROACH:
The program to be evaluated is a collaborative program of five voluntary hospitals on the mid-north side of Chicago. It differs from most existing Medicare reimbursed Home Health Care agencies in that services are not restricted to patients requiring skilled nursing care, and it has no limits on number of visits provided. There is no prior hospitalization requirement, and it provides physician home visits. The program attempts to bridge the as-yet-unfilled gap between the two main streams of home care services in the United States - namely, medically oriented visiting nurse services and social service sponsored homemaker services. Evaluation will address outcome, utilization, and implementation questions. The evaluation of outcomes entails a quasi-experimental design utilizing a non-equivalent control group with pre and post-test measures on two groups of 100 homebound individuals 60 years of age and older.

FINDINGS:
Several bills have been drafted in State legislatures and in Congress which advocate the expansion of Home Care benefits. The evaluation proposed under this dissertation grant award should provide additional insight into the effectiveness of an innovative Home Care Program which attempts to delay or prevent institutionalization for disabled homebound elderly.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03312 CATEGORY: LONG TERM CARE - HOME AND COMMUNITY SERVICES

TITLE: Cost and Efficacy of Home Care for COPD Patients

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-79	05-31-83	176,226	176,226	953,661	BERGNER, MARILYN UNIVERSITY OF WASHINGTON SEATTLE WASHINGTON 98195

OBJECTIVE:
To conduct a randomized control trial to test whether home health care is a cost-effective alternative to combinations of out-patient and institutional care.

APPROACH:
Approximately 420 patients with chronic obstructive pulmonary disease (COPD), stratified by severity of disease, will be randomly assigned to one of three groups: (1) special home care by visiting nurses trained in the management of COPD patients; (2) regular home care by visiting nurses with only general training; (3) no home care services. Comparisons will be made between the three groups on costs and efficacy of care. An analysis of changes in disease severity and behavioral functioning due to the treatment by the home care nurses of these two types will be carried out. The approach will permit comparisons of all costs associated with the three groups. Data sources include visiting nurse visits, measurements at entry, after 6 months and at exit from the study (including the levels of health determined by the Sickness Impact Profile), physician, hospital and other sources.

FINDINGS:
This research is relevant to policy because it examines treatment modalities which have the potential of reducing costs of care for a patient population, COPD sufferers, which represents a substantial number of persons. It has been estimated that 15 million Americans have this disease and that their treatment produces a substantial amount of cost because of hospital care. The substitution of a less expensive home care alternative is clearly desirable if it can be shown that patients receive at least comparable care and are able to function at least as well.

RECORD NO: H002894 CATEGORY: PLANNING AND REGULATION EVALUATION OF REGULATORY PROGRAMS

TITLE: Changing Patterns of Control of Nursing Homes

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-77	09-30-79	0	48,951	48,951

INVESTIGATOR NAME AND ADDRESS

SMITH, DAVID B
TEMPLE UNIVERSITY
BROAD ST AND MONTGOMERY AVE
PHILADELPHIA
PENNSYLVANIA 19122

OBJECTIVE:
To evaluate the effectiveness of specific regulatory controls of more punitive nursing home regulations adopted in 1975-76 in New York State.

APPROACH:
This is a descriptive study where nursing home administrators and key governmental officials will be interviewed, regulatory records abstracted, and finally summary papers written and discussed with those originally interviewed. This will provide a qualitative assessment of administrator response to the new regulations.

FINDINGS:
Evaluating public regulation of the nursing home industry is important given the fact that incentives to self-regulate due to competitive market pressures have been eliminated by third party payor behavior.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03596 CATEGORY: PLANNING AND REGULATION - EVALUATION OF REGULATORY PROGRAMS

TITLE: Mandatory Licensure of Nurses: Introduction and Impact

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-01-79	05-31-80	14,519	14,519	14,519

INVESTIGATOR NAME AND ADDRESS

WHITE, WILLIAM D
UNIVERSITY OF ILLINOIS CHICAGO CIRCLE
BOX 4348
CHICAGO
ILLINOIS 60680

OBJECTIVE:
To investigate why occupational licensure laws for registered nurses have been changed from voluntary to mandatory laws in most of the states in the United States since 1940, and what has been the impact of introducing these mandatory laws on the wages and total employment of registered nurses.

APPROACH:
This study will include a brief review of the history of nursing education and regulations. Case studies will be done of who supported and who opposed attempts to introduce mandatory licensure for registered nurses in several major states, (California, Illinois, and New York). These case studies will be complemented by published economic and demographic data from sources such as the U.S. Census, the American Nurses Association, American Hospital Association, and the Division of Nursing, U.S., PHS.

FINDINGS:
This research examines the introduction and economic impact of mandatory licensure of registered and practical nurses. Based on historical analysis, efforts to introduce mandatory laws have been lead by nursing groups and changing labor market conditions have played an important role in motivating these efforts. An econometric analysis of the diffusion of mandatory laws since 1950 suggest that these laws have been introduced first in states where the number of RNs is large relative to other types of personnel and laws seem least likely to impose binding constraints on employers, who have been the main opponents of mandatory laws. An econometric analysis of cross-section data for 1960 and 1970 suggests that mandatory licensure of registered nurses may have increased the wages and employment of this group and reduced them for practical nurses in 1970. These results need to be treated with caution, however, because of problems with selection bias.

TITLE: Regulation on the Adoption and Diffusion of CT Technology

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	09-29-81	77,986	77,986	166,084

INVESTIGATOR NAME AND ADDRESS

BICE, THOMAS W
UNIVERSITY OF WASHINGTON

SEATTLE
WASHINGTON 98195

OBJECTIVE:
To study the impact of government regulations on the diffusion and adoption of Computed Tomography (CT) technology.

APPROACH:
Data from a 1973-78 census of CT scanners carried out by the Office of Technology Assessment and information from other secondary data sources will be analyzed to test different hypotheses on the likely impact of regulations on: (1) types of hospitals that adopted CT technology; (2) the timing of their adoption; (3) the rate of diffusion among states and Health Systems Agencies, and (4) the extent to which CT scanners were acquired by institutions or persons other than hospitals. The analysis will include estimates of the diffusion curve for classes of hospitals, the saturation level in market areas, the effect of capital expenditures/services (CES) controls and regulatory intensity on eventual level of scanner adoption, the effect of CES controls on the rate of diffusion of scanners, and the effect of CES controls on the proportion of scanners located outside hospitals. Various forms of logistic models will be used for mathematical representation of the diffusion process.

FINDINGS:
This study addresses matters pertaining to sources of variations in the effectiveness of regulation among health service areas. The variable "regulatory intensity" is viewed as a plausible operational indicator of hospital's regulatory environments that can be used to capture the cost containment fervor within a medical service area.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 23379300103 CATEGORY: PLANNING AND REGULATION - EVALUATION OF REGULATORY PROGRAMS

TITLE: A Synthesis of Research Studies on Hospital Productivity

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	04-30-80	62,299	62,299	62,299	DEANE, ROBERT T APPLIED MANAGEMENT SCIENCES INC 962 WAYNE AVENUE SILVER SPRING MARYLAND 20910

OBJECTIVE:
To provide health planners and policymakers with an overall assessment of the state-of-the-art in hospital productivity measurement.

APPROACH:
A literature search of economics, health administration and management sciences on the measurement of hospital productivity was conducted. The measurements of hospital productivity for different levels were synthesized. Data and methodologies were discussed.

FINDINGS:
Appropriate measurements of hospital productivity for different levels are available. For health planning agencies, systemwide measurements are more important and practical. Further research on the impacts of hospital services on health status and on patient satisfaction are desirable, but can be difficult and costly.

RECORD NO. 23379300201 CATEGORY: PLANNING AND REGULATION - EVALUATION OF REGULATORY PROGRAMS

TITLE: Review and Analysis of Programs to Limit Capital Expenditures for Health Care Institutions

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-31-79	04-14-80	89,635	89,635	89,635

INVESTIGATOR NAME AND ADDRESS

VALIANTE, JOHN D
ICF INCORPORATED
1850 K STREET, NW
WASHINGTON
DISTRICT OF COLUMBIA 20006

OBJECTIVE:
To describe and analyze existing, proposed and potentially useful formulae for the limitation and allocation of capital expenditures for new institutional facilities and services; and to conduct limited comparative analyses of the potential impact of these alternative formulae.

APPROACH:
The project will review existing and proposed systems and, with the assistance of a panel of experts in this area, develop alternative formulae for limiting and allocating capital expenditures. Using data from existing sources, such as the American Hospital Association Annual Surveys; the Contractor will prepare a final report which assess the pros and cons of various allocative formulae with respect to such criteria as potential for cost containment, increased access, efficiency, case of administration and ability to allocate resources to areas of unmet needs.

FINDINGS:
The results of this project will provide needed information on the impact of various formulae to policy makers within the Department, and will be useful as well to Congress in debating the potential effects of pending legislation to establish National expenditure limits for health care institutions.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02497 CATEGORY: PLANNING AND REGULATION - PLANNING TECHNIQUES

TITLE: Health Status Maximization and Manpower Allocation

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
01-01-77	12-31-79	18,976	168,037	168,037	LIPSCOMB, JOSEPH DUKE UNIVERSITY DURHAM NORTH CAROLINA 27706

OBJECTIVE:
To test the feasibility of a community employing a resource allocation model in planning health service manpower investments, addressing several clearly defined health problems.

APPROACH:
The researchers together with representatives of the Papago Indian Tribe of Southern Arizona will initially define a set of health statuses based on functional ability and a weighting scheme which is meaningful for this Indian community. Next, health care intervention activities will be specified for four disease conditions. Using data based on clinical records and observations, a resource allocation model will be designed and applied where the effectiveness of an intervention is measured by duration of stay at a certain functional level or health state. A statistical simulation model will then be used to determine the most effective allocation of manpower resources over time. Repeated evaluation will take place throughout the course of the study to assess the degree to which the planning process resulted in changes in provider behavior.

FINDINGS:
Although limited in terms of the population and diseases studied, this project is developing a needed planning tool which ties together process (interventions) and outcome (functional levels) - a tool which if refined could significantly enhance the manpower planning capabilities of Health System Agencies.

RECORD NO. HS02634 CATEGORY: PLANNING AND REGULATION - PLANNING TECHNIQUES

TITLE: Regionalization of Blood Banking Services

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
08-01-77	06-30-80	0	120,398	120,398

INVESTIGATOR NAME AND ADDRESS

PIERSKALLA, WILLIAM P
NORTHWESTERN UNIVERSITY

EVANSTON
ILLINOIS 60201

OBJECTIVE:
To develop a conceptual framework and method for choosing among alternative regional blood service systems.

APPROACH:
Using data on blood banking systems in the Chicago Standard Metropolitan Statistical Area models will be analyzed to predict the costs of information processing, equipment, space, and communications for three proposed alternative regional organizational structures that are characterized by different degrees of centralized control.

FINDINGS:
This report is an in-depth analysis of the pros and cons of regionalization as a strategy for the effective use of American blood resources. Survey data of the operational costs and characteristics of regional, community, and hospital blood banks are presented. The investigators were able to quantify the potential benefits of alternative structures for regionalization. The results indicated that the potential cost savings are significant. The planning, design, and implementation of a regional blood banking structure is discussed in detail.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02778 CATEGORY: PLANNING AND REGULATION - PLANNING TECHNIQUES

TITLE: Need and Use of Health Services in Underserved Areas

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
08-01-77	07-31-80	0	178,491	178,491

INVESTIGATOR NAME AND ADDRESS

KVIZ, FREDERICK J
UNIVERSITY OF ILLINOIS MEDICAL CENTER
BOX 6998. 1737 W POLK ST
CHICAGO
ILLINOIS 60612

OBJECTIVE:
To determine whether residents of Medically Underserved Areas (MUAs) perceive themselves to be medically underserved. The Index of Medical Underservice (I.M.U.) was developed at the University of Wisconsin for use by DHEW in identifying areas likely to be eligible for special Federal funding.

APPROACH:
Primary care for both physical and mental health will be the focus of the study. Since people who don't feel underserved are likely to underutilize augmented health services, an attempt will be made to incorporate data on consumer concerns and perceptions into provider assessments of underserved areas.

FINDINGS:
This study evaluated the validity of the index of medical underservice (IMU) by examining the ability of the index to discriminate levels of underservice as defined by consumers' assessments of their areas in self-reports. Analysis of the data revealed that although statistically significant differences in the expected directions were observed across IMU values for almost all of the 17 survey measures, the index is a weak discriminator, explaining only 17 percent of the variance in the survey measures as a whole; only 10 percent of the variance among the survey measures in the distinction between underserved and not underserved; only 20 percent of the variance in the survey measures in a comparison of sample counties having the lowest IMU scores with those having the highest IMU scores. Additionally, the majority of the explained variance for each measure is nonlinear. According to the investigator, the findings, although subject to limitations, do not support the validity of the index of medical underservice as an indicator of the relative scarcity of health services and seriously question the utility of the IMU to determine funding priorities for health programs.

RECORD NO. HS03238 CATEGORY: PLANNING AND REGULATION - PLANNING TECHNIQUES

TITLE: Medical Technology Adoption Decision in Hospitals

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	09-29-81	108,244	108,244	219,746

INVESTIGATOR NAME AND ADDRESS

GREER, ANN L
UNIVERSITY OF WISCONSIN MILWAUKEE

MILWAUKEE
WISCONSIN 53201

OBJECTIVE:
To investigate the process through which decisions to adopt or not adopt (including failure to consider adoption) selected hospital based medical technologies are made, and to develop detailed models of this process.

APPROACH:
Ten technical innovations will be selected and paired with 25 general acute care hospitals in the southeastern Wisconsin Health Services Area. Instruments to guide focused interviews will be developed for each of three major categories of interviewees: physicians, board members and administrators. A total of 473 interviews will be conducted with respondents from the above categories and other officials in related health organizations and agencies. Coding schemes will be developed based upon preliminary analysis of the interview data. Analytic induction, a technique which provides for the conceptual emergence of new relationships inherent in qualitative data while simulataneously providing clear rigor to analyses and presentation of findings, will be used to maintain continuous interplay between data and conceptual formulation.

FINDINGS:
The study will produce detailed models of the hospital adoption process which can then be empirically tested using more structured methodologies. Such knowledge would allow Federal policy-makers to better understand the forces and motivations which govern the adoption of medical technology in hospitals and thereby to develop properly focused and more effective incentive and regulatory mechanisms.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03287 CATEGORY: PLANNING AND REGULATION - PLANNING TECHNIQUES

TITLE: End Stage Renal Disease: Predictive Model for Resource Forecasting

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-78	12-31-79	0	51,476	51,476	RIKLI, ARTHUR E UNIVERSITY OF MISSOURI COLUMBIA COLUMBIA MISSOURI 65201

OBJECTIVE:
To develop a forecasting tool for planners in order to determine the need for and availability of end stage renal disease (ESRD) services and facilities.

APPROACH:
Several models are to be constructed and validated. A population model will estimate patient progression through various stages of kidney dysfunction. This is complemented by an alternative therapy population model that tracks patients through the care process. A resource consumption model will summarize facility, manpower and other resource requirements for treating the population under study. A cost of care model and a resources allocation model predict cost for care rendered and the implications of alternative treatment procedures and resources used for various components of the health care system, respectively.

FINDINGS:
All six of the population models tested had significant errors in their forecasts for the base population. The resource allocation (consumption) model also contained significant error, although smaller than the population model forecasts. Three critical advances in the art were identified: long-range accuracy of the model forecasts were greater than that of simple formulas used by a majority of health planners; model results are immune to local pressures to expand or contain ESRD services; and, the opportunity for coordinated ESRD health planning on local, state, and regional levels is enhanced when common methodologies are mutually acceptable to health planning bodies.

RECORD NO. HS03342 CATEGORY: PLANNING AND REGULATION - PLANNING TECHNIQUES

TITLE: A Cost Effectiveness Manual for H.S.A. Planning

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-78	02-28-80	0	50,957	50,957

INVESTIGATOR NAME AND ADDRESS

KRISTEIN, MARVIN M
AMERICAN HEALTH FOUNDATION
320 E 43RD ST
NEW YORK
NEW YORK 10017

OBJECTIVE:
To prepare a manual for use by local planning agencies in the preparation and evaluation of cost-effectiveness analysis, with particular emphasis on health promotion and disease prevention activities.

APPROACH:
A summary of the technical literature and applied studies dealing with cost-effectiveness and cost-benefit analysis was prepared. An algorithm which offers a logical structure and approach to the reasoning involved in establishing a cost-effectiveness basis for impacting decision-making was then developed. The algorithm places emphasis on using well established epidemiological and clinical data to determine efficacy, cost-effective alternatives and priority in terms of comparing costs and benefits. The use of the algorithm is demonstrated using examples from lung, breast and colo-rectal cancer, coronary artery bypass surgery and coronary care units.

FINDINGS:
This manual is expected to assist local planning agencies in making rational decisions on the allocation of resources. It is hoped that application of the algorithm will help reduce expenditure and activity devoted to the mass application of unefficacious procedures, thus saving scarce resources for productive activities without unfavorably impacting the real health status of the community.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03459 CATEGORY: PLANNING AND REGULATION - PLANNING TECHNIQUES

TITLE: Development and Use of Expenditure Data for HSA's

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-78	06-30-80	0	34,772	34,772

INVESTIGATOR NAME AND ADDRESS

PUSKIN, DENA S
FINGER LAKES HEALTH SYSTEMS AGENCY
360 EAST AVE
ROCHESTER
NEW YORK 14604

OBJECTIVE:
To develop improved estimates of health care expenditures for small geographic areas and to document their use in health care planning.

APPROACH:
The development and use of health expenditure profiles in a nine county region (Finger Lakes Health Systems Agency area) will be studied. Expenditure profiles based upon place of residence for the year 1976 will be prepared. Preliminary work on expenditure profiles will serve as the basis for the expansion and refinement of existing methodology including coverage of additional providers and service, secondary flow analysis (transfer of funds among health care providers in a region), and the use of Medicare reimbursement data by county of patient residence. Data will be collected to allow for data reorganization to meet a variety of needs. Applications of expenditure profile analysis will be examined and documented in order to facilitate use by other planning agencies.

FINDINGS:
The unique feature of the proposed estimates is that they will represent funds actually spent by or on behalf of area residents regardless of where the service is rendered. Estimates developed in such a manner facilitate population based planning by integrating financial data with other characteristics of the population under study. The expenditure profiles will (1) provide a baseline upon which to monitor growth and redistribution of services among health care sectors in an area, (2) enable intra- and inter-regional comparisons, and (3) facilitate analysis of the impact of cost containment strategies within a defined area.

TITLE: Applied Economic Analysis in Appropriateness Review

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-78	05-31-80	4,523	48,513	48,513	ROBERTS, MARC J HARVARD UNIVERSITY BOSTON MASSACHUSETTS 02115

OBJECTIVE:
To develop and test analytical methods, and prepare a manual that will assist health planners in the conduct of appropriateness review of services and facilities as required by the national planning law (P.L. 93-641).

APPROACH:
An analytical framework for evaluating service closure will be developed based on decision theory and cost-benefit analysis. Specifically, the costs and benefits of alternative strategies for the closure of cardiac surgery and diagnostic departments in Massachusetts will be assessed. Three levels of service department closure and a moratorium on further expansion will be the alternatives examined. Main source of data is a Survey of Cardiac Diagnostic, Pacemaker, and Surgical Procedures carried out in 1976 by the Office of State Health Planning in Massachusetts.

FINDINGS:
The economic methods and criteria developed in this study will help planning agencies in their evaluation of consolidation and closure plans for facilities and services.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03543 CATEGORY: PLANNING AND REGULATION - PLANNING TECHNIQUES

TITLE: An Analysis of Regional Health Planning Methodologies

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-78	03-31-80	0	53,273	53,273	COHEN, MORRIS A UNIVERSITY OF PENNSYLVANIA PHILADELPHIA PENNSYLVANIA 19174

OBJECTIVE:
To enhance the accessibility of quantitative methodologies which are useful in the support of State and local health planning activities in the area of cost containment.

APPROACH:
Several existing quantitative methodologies will be critically assessed in terms of purpose, scope, availability and quality of data requirements, cost, restrictiveness of assumptions and utility in supporting health planning efforts. This assessment will be partially based on a review of the relative success in implementing such methodologies in the preparation of health plans throughout the country. Evaluation will also be carried out in the context of a specific health planning project, the development of a maternity and obstetrics plan for a health services area in Central New Jersey.

FINDINGS:
Final report documents the unsophisticated methodologies used by most planning agencies. For the most part, the report is limited to the review, evaluation and presentation of methodologies for estimating bed requirements within hospitals or regions.

RECORD NO. H305569 CATEGORY: PLANNING AND REGULATION - PLANNING TECHNIQUES

TITLE: A Guide to Investment Criteria for Critical Care Units

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-78	11-30-79	0	47,280	47,280	SHERMAN, MARK A COLUMBIA UNIVERSITY NEW YORK NEW YORK 10027

OBJECTIVE:
To prepare a guidebook for use by State and local health planning agencies that identifies investment criteria for critical medical care units.

APPROACH:
An extensive literature review and synthesis will be made of studies that evaluate the efficacy, cost-effectiveness, or cost-benefit of critical care units. This will be supplemented by relevant studies which have been conducted by State health planning agencies. An assessment will be made of the role of quantitative techniques, the resources and data required, and the implementation and evaluation of resulting plans. Specific criteria for investing in various critical care units will be quantified including medical, economic, and demographic variables.

FINDINGS:
The proposed analytical synthesis of extant literature will assist health planning agencies in making informed decisions with respect to investment in critical care medical units.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03675 CATEGORY: PLANNING AND REGULATION - PLANNING TECHNIQUES

TITLE: The Relationship of Patient to Physician to Hospital Flows and the Determination of Acute Service Area

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-79	11-30-79	12,880	12,880	12,880

INVESTIGATOR NAME AND ADDRESS

FAULKNER, MICHAEL J
RHODE ISLAND HEALTH SERVICES RESEARCH
56 PINE ST, STE 600
PROVIDENCE
RHODE ISLAND 02903

OBJECTIVE:
To investigate factors related to the impact of patient flows in the specification and interpretation of acute hospital service areas.

APPROACH:
The State of Rhode Island is the study site. The specific factors to be addressed are: (1) history, importance, and methods for identifying hospital service areas; (2) problems, limitations, and weakness of current hospital service areas approaches; (3) relationship of patient/physician/hospital flow on hospital service areas patterns; (4) identification of new approaches, and (5) impact of approaches on health service planning. Secondary data sources include the Uniform Hospital Discharge Data Set, the Health Facilities Data File, the Health Manpower Data File, and the Rhode Island Health Interview Survey. Two measures of patient flow used in the analysis are residency dependency and hospital dependency. Service area patient out-flow is the dependent variable and patient, physician and hospital characteristics are the independent variables.

FINDINGS:
The investigator reports that within a hospital service area: local area patients tend to depend upon local hospitals; there is a slight relationship for local physician dependency upon local hospitals; and different areas show different patient dependence upon hospitals. No relationship existed for local hospital dependency upon local patients and local physician dependency upon local population. For hospital admissions, local physicians tend to rely upon local hospitals. A major conclusion of the study is that local hospital services areas are composed of smaller physician service areas whose link with local residents relates to the extent of their local hospital use. Also, he concludes that the number of local beds relates slightly to use by local residents.

TITLE: Legal Issues in Health Care

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-30-74	09-29-80	82,025	470,818	470,818	HAVIGHURST, CLARK C DUKE UNIVERSITY DURHAM NORTH CAROLINA 27706

OBJECTIVE:
To explore the question of whether more competition in the health care industry would be in the public interest and to suggest approaches, such as anti-trust law enforcement through the courts, which might achieve this end.

APPROACH:
Within the anti-trust framework, approaches to increasing competition in health care will be examined by a team of lawyers, utilizing examination of case law, court decisions, empirical on-site investigation of providers' records, etc.

FINDINGS:
A monograph on anti-trust, competition, law and policy in relation to HMOs has been published. The principal investigator was also one of the invited speakers at a meeting sponsored by the Federal Trade Commission on competition in the health care industry. Findings from a rigorous examination of this issue will be useful to the FTC, the Congress, and others who are considering more strenuous anti-trust enforcement in the health industry.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02932 CATEGORY: PLANNING AND REGULATION - THE PROCESS AND POLITICS OF PLANNING

TITLE: The Politics of Health Care Regulation

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-78	04-30-81	38,305	101,781	101,781	BROWN, LAWRENCE D BROOKINGS INSTITUTION 1775 MASSACHUSETTS AVE NW WASHINGTON DISTRICT OF COLUMBIA 20036

OBJECTIVE:
To examine the structure, goals, strategies and interorganizational relations of selected regulatory programs (Professional Standards Review Organizations; Certificate-of-Need; rate-setting; and planning by Health Systems Agencies).

APPROACH:
The study will examine the workings of the four major regulatory programs in two localities in each of four states. A case study approach is used. The sampling strategy is to select two states well endowed with high quality health care resources, where the major concern is restraining extravagance, and two states that are underserved, where the concern is improving quality and access. Within each of the four states, two areas will be chosen for study--one well served and one underserved. In each of the eight sites, the operation of regulatory agencies will be examined by focusing on three outcomes--one having to do with acquisition of resources (a question of regulatory efficiency), one having to do with distribution of resources among social classes, geographical areas, or categories of the sick (an issue of regulatory equity), and one outcome regarding coordination (a matter of regulatory effectiveness). Analysis will center on the structure of regulatory organizations, the definition of organizational goals and procedures, the strategies the organization pursues, and its coordination with other organizations.

FINDINGS:
A description of the strengths and weaknesses of current regulatory efforts will assist policy makers in discussion concerning possible (a) continuation and refinement of current policies; (b) greater centralization of Federal regulation and a larger Federal role; or (c) abandonment of public regulation in favor of improving market processes and private sector incentives.

TITLE: Organizational Analysis of Affiliation Relationships

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-15-78	05-14-80	0	30,500	30,500

INVESTIGATOR NAME AND ADDRESS

MURPHY, JANE G
UNIVERSITY OF PENNSYLVANIA

PHILADELPHIA
PENNSYLVANIA 19174

OBJECTIVE:
To investigate the extent and nature of affiliation agreements between medical schools and hospitals in order to identify environmental factors or conditions that facilitate or impede cooperation and to understand the results of such cooperation.

APPROACH:
Based on several organizational theories, hypotheses are proposed concerning the impact of different environmental conditions (e.g., institutional competition for resources, quality of education and expertise of technical level personnel) on the probability that a medical school and a hospital will develop affiliation relations, and on the nature of such relations. To test the hypotheses, data are to be collected at each of the six medical schools and 122 hospitals in the Philadelphia SMSA. Four phases of the study include interviews with administrative personnel at each of the six medical schools; case studies of two hospitals affiliated with each of the medical schools; survey of administrators and selected chiefs of services at the 116 hospitals not in the case studies; and use of existing data regarding inter-hospital ties and individual hospital characteristics. Regression and discriminant analyses will be used to develop models of affiliation relations.

FINDINGS:
The study will provide an empirical test of the validity of aspects of several of the prominent theories of organizational relations, and will contribute to the methodologies available to organizational and medical sociologists. Information regarding the nature of these relationships can be used to develop public policy strategies to promote the rational development of affiliation agreements between hospitals and medical schools.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03363 CATEGORY: PLANNING AND REGULATION - THE PROCESS AND POLITICS OF PLANNING

TITLE: The Effect of the Courts on Health Regulation

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-78	09-29-80	0	54,049	54,049

INVESTIGATOR NAME AND ADDRESS

FEDER, JUDITH M
URBAN INSTITUTE
2100 M ST NW
WASHINGTON
DISTRICT OF COLUMBIA 20037

OBJECTIVE:
To identify the substantive and procedural requirements for legally or judicially supportable health care regulation, and the factors or conditions that affect both the occurrence and outcome of litigation.

APPROACH:
A comprehensive review of judicial decisions concerning the certificate-of-need process will be conducted. An analysis of the legal record to date and interviews with participants in the adjudicatory process in selected States will highlight regulators' interaction with the courts and identify factors that affect both the likelihood of legal challenge and its outcome.

FINDINGS:
This study will provide a guide on legal issues for health planners involved in capital expenditures regulation. Such information will be useful in understanding the effect of the courts on regulatory behavior and of value to policy makers at the State and Federal level who are responsible for designing and overseeing the regulatory process.

RECORD NO. HS03414 CATEGORY: PLANNING AND REGULATION - THE PROCESS AND POLITICS OF PLANNING

TITLE: Health Planning and State Insurance Regulators

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-78	12-31-79	0	30,187	30,187

INVESTIGATOR NAME AND ADDRESS

TANNENBAUM, KENNETH A
HEALTH PROGRAMS RESEARCH
BOX 7009
ANN ARBOR
MICHIGAN 48107

OBJECTIVE:
To develop a handbook for health planning agencies to help them coordinate planning of cost containment activities with State insurance regulators.

APPROACH:
A literature review of State statutes and enabling legislation governing insurance regulators, and activities undertaken by insurance regulators in the past, is to be prepared. This review will identify the legal basis by which State health insurance regulation will impact on cost containment; identify and evaluate the effectiveness of those activities of insurance regulators which have impacted on health care costs; and present strategies by which health planners and insurance regulators can coordinate and implement plans for cost containment.

FINDINGS:
The study will provide information and strategies whereby health planners may coordinate their cost containment activities with insurance regulators and make appropriate use of regulatory authorities for implementing such activities.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03423 CATEGORY: PLANNING AND REGULATION - THE PROCESS AND POLITICS OF PLANNING

TITLE: Critical Expenditure Limits and Health Planning Procedures

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-78	04-30-80	0	54,511	54,511	WAGNER, JUDITH L URBAN INSTITUTE 2100 M ST NW WASHINGTON DISTRICT OF COLUMBIA 20037

OBJECTIVE:
To identify and analyze various procedural approaches for the making of certificate-of-need decisions by health planning agencies under fixed capital spending limits.

APPROACH:
Written documentation on health planning agency procedures in allocating resources, including innovative planning or regulatory approaches, will be analyzed. This will be supplemented by a review of preparations for capital expenditure limits in Maryland and New York where they have been considered. A working paper will outline the critical procedural choices involved in making certificate-of-need decisions under a spending constraint. A survey of the literature on decision-making will be done in order to assess whether lessons for health planning can be drawn from other applications. Recommendations for decision-making approaches and techniques appropriate for the health planning environment under fixed expenditure limits will be provided.

FINDINGS:
Decision-making procedures employed by the planning agencies in allocating resources will probably require modification in the advent of capital expenditure limits. This study can help to define the review criteria and process useful for making deliberate choices in the face of imposed fiscal constraints.

RECORD NO. HS03435 CATEGORY: PLANNING AND REGULATION - THE PROCESS AND POLITICS OF PLANNING

TITLE: Achieving Effective and Equitable Service Cutbacks

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-78	12-31-79	0	51,433	51,433	LAMBRIGHT, W HENRY SYRACUSE RESEARCH CORPORATION MERRIL LN, UNIVERSITY HTS SYRACUSE NEW YORK 13210

OBJECTIVE:
To review and synthesize information on the characteristics of alternative strategies to reduce the supply of health care services, the political, economic, and administrative consequences of such strategies, and the appropriate role for State and local health planning agencies in implementing or encouraging a reduction in services.

APPROACH:
Literature on the elimination of excess and duplicative health services will be reviewed. This review will examine different strategies for supply reduction (e.g., facility closure vs. reduction in beds across institutions); the legal, organizational and other arguments for and against different approaches; sources of sponsorship (e.g., public vs. private); the economic, political and other environmental characteristics which appear to favor to militate against different strategies; the processes by which different alternatives are implemented or defeated; the length of time associated with successful implementation; and the evidence concerning the cost-savings and other impacts of alternative supply reduction schemes. Unpublished documents and interviews with health officials and providers in upstate New York and termination activities and interorganizational cooperation will supplement the literature review.

FINDINGS:
Documentation of the kinds of problems and issues likely to be encountered in efforts to terminate health care services will assist State and local health planning agencies in implementing supply reduction strategies.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03755 CATEGORY: PLANNING AND REGULATION - THE PROCESS AND POLITICS OF PLANNING

TITLE: Legal Issues in Hospital Planning Decisions

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-79	06-15-81	112,859	112,859	120,775	WEINER, STEPHEN M BOSTON UNIVERSITY 881 COMMONWEALTH AVE BOSTON MASSACHUSETTS 02215

OBJECTIVE:
To identify and analyze legal issues arising from efforts of hospitals to merge, consolidate services, close or convert services, or close institutions.

APPROACH:
An analysis of existing and available materials relating to multi-institutional arrangements, conversions and closures will be made to identify legal issues that emerged and determine how they were handled. The research will be conducted primarily in Massachusetts, a state which has experienced the closure of sixteen hospitals and a reduction of 46 percent in obstetric services since 1967. Three areas of legal concern will be emphasized: fiduciary responsibility, institutional constraints, and the role of external regulatory programs. The issues identified will be categorized and analyzed to obtain specific understanding of their principles and implications and to provide recommendations with respect to their relative significance.

FINDINGS:
This research is expected to provide hospital boards and planning and regulatory agencies with a specification of the legal obstacles that may be encountered in making decisions relevant to multi-institutional arrangements, conversions and closures, and form the basis for developing strategies to deal with these obstacles at the outset.

RECORD NO. 233793011 CATEGORY: PLANNING AND REGULATION - INDUSTRY ANALYSIS

TITLE: A Profile of the Medical Technology Industry and Governmental Policies

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-28-79	06-30-81	201,715	201,715	201,715	WENCHEL, H ELIZABETH YOUNG, ARTHUR & COMPANY 1025 CONNECTICUT AVENUE WASHINGTON DISTRICT OF COLUMBIA 20036

OBJECTIVE:
To develop a comprehensive profile of the structure of the medical technology equipment industry, and to identify and describe existing governmental policies and their effect on the research, development, and marketing strategies of the industry.

APPROACH:
The data elements required to construct a comprehensive profile of the industry will be identified and a categorization scheme developed. Existing secondary data sources will be identified, their availability, completeness, and reliability determined, and appropriate data collected and arrayed. Federal, State and local policies and regulations that bear on the production and use of medical devices and instruments will also be identified and described. Subsequent analyses, which will incorporate the use of case study techniques, will be conducted to determine their effect or potential impact on research, development, manufacturing, marketing, and utilization of medical equipment/technology.

FINDINGS:
The anticipated outcome includes a data base and categorization reflecting hypotheses relating industry performance to market structure and performance. This is the first, essential step towards determining the most appropriate methods to influence the development of technology within the industry. Additionally the data base will prove invaluable for future and more definitive industrial organization studies.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS01545 CATEGORY: QUALITY OF CARE - MONITORING TECHNIQUES

TITLE: Dental Practice Profiles: A Quality Assessment Model

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
05-01-74	11-30-79	0	531,528	531,528

INVESTIGATOR NAME AND ADDRESS

BAILIT, HOWARD L
UNIVERSITY OF CONNECTICUT HEALTH CENTER
FARMINGTON AVE
FARMINGTON
CONNECTICUT 06032

OBJECTIVE:
To develop as a quality assessment tool dental practice profiles based on information obtained from patient records and insurance claims and validated by direct patient examination.

APPROACH:
Grantee abstracted patient record and insurance form data from 20 private practitioners and related this to direct clinical examinations of patients from these practices using Connecticut State Dental Society Criteria. Study was validated by expansion to over 200 dentists at Blue Cross/Blue Shield of New York to determine feasibility of the approach on a larger scale.

FINDINGS:
The preliminary study demonstrated that certain service and practice characteristics correlate significantly with the quality of care. Findings also indicated a relationship between quality and patient income--low income patients had fewer preventive services and more extractions and dentures. Extended study focused on sharpening assessment capability of profiles and establishing validity in another setting. The practice profile technique should provide a significant contribution to screening of dental practices on a National basis at reasonable cost.

RECORD NO. HS01824 CATEGORY: QUALITY OF CARE - MONITORING TECHNIQUES

TITLE: Third Party Dental Quality Assurance System

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-01-76	09-30-79	0	591,374	591,374

INVESTIGATOR NAME AND ADDRESS

BAILIT, HOWARD L
UNIVERSITY OF CONNECTICUT HEALTH CENTER
FARMINGTON AVE
FARMINGTON
CONNECTICUT 06032

OBJECTIVE:
To evaluate the effectiveness of pre-treatment review of proposed dental treatment plans in relation to post-treatment clinical assessment.

APPROACH:
Grantee will compare treatment plans of project dentists, community dentists and insurance dental consultants with direct clinical examinations for 2,000 patients covered under one insurance plan to determine effectiveness of pre-treatment review system in monitoring quality and cost of care.

FINDINGS:
The trend toward dental health insurance implies that the annual expenditures for pretreatment review may be into the hundreds of millions by the next decade. Study data should provide insights into the need for this traditional but unvalidated review mechanism to prevent dental practitioner abuses and should assist in optimizing the system itself.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02081 CATEGORY: QUALITY OF CARE - MONITORING TECHNIQUES

TITLE: Quality Assessment and Assurance

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
05-01-76	04-30-80	27,738	165,927	165,927	DONABEDIAN, AVEDIS UNIVERSITY OF MICHIGAN ANN ARBOR MICHIGAN 48109

OBJECTIVE:
To review, critically assess, and synthesize the literature on quality assessment and assurance including the appropriateness of use of service.

APPROACH:
A cogent, documented and authoritative assessment of the "state of the art" will encompass quality assessment as a research tool, quality assurance as an administrative tool and an understanding of the "the epidemiology of quality" as a prerequisite to the design of medical care programs and systems.

FINDINGS:
This manuscript is expected to be relevant and immediately useful to PSROs health care policy, and quality research program development.

RECORD NO. HS02764 CATEGORY: QUALITY OF CARE - MONITORING TECHNIQUES

TITLE: The Development of Clinimetrics

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
01-01-79	06-30-80	76,861	76,861	84,603	FEINSTEIN, ALVAN R YALE UNIVERSITY NEW HAVEN CONNECTICUT 06520

OBJECTIVE:
To further develop a system called "Clinimetrics," which deals with classifying and quantifying clinical information.

APPROACH:
The processes of "mensuration" (conversion of observations into primary data) and "quantification" (arrangement, enumeration, and analysis) of symptoms and their attributes will be further analyzed and improved. A compendium will be prepared of clinical indices and scales cited in the research/literature and will provide critical review of some of these indices and scales.

FINDINGS:
The anticipated benefits of an improved system for structuring and classifying medical information include the ability to more precisely define, quantify, and analyze signs, symptoms, and other descriptive clinical information. These kinds of data would be more useful for following the courses of diseases and for predicting clinical outcomes. The structuring and quantification of medical information also can benefit medical education.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02838 CATEGORY: QUALITY OF CARE - MONITORING TECHNIQUES

TITLE: Diagnostic Process Quality Assessment Study Design

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-77	10-31-79	3,888	50,615	50,615

INVESTIGATOR NAME AND ADDRESS

BARKAN, HOWARD
UNIVERSITY OF CALIFORNIA SAN FRANCISCO
3RD AND PARNASSUS AVE
SAN FRANCISCO
CALIFORNIA 94143

OBJECTIVE:
To study the methodological problems of quality assessment and evaluation related to diagnosis in medical care.

APPROACH:
A comprehensive conceptual framework and set of methods will be developed for the assessment of the diagnostic process. Group process and decision theory techniques will be used to generate pilot criteria using this framework in order to apply it to quality assessment.

FINDINGS:
In this study, methods for assessing the quality of medical care are analyzed in terms of a consistent framework and techniques are developed. This analysis is applied to medical diagnostic processes. Several examples are provided. The relationship of medical care to patient outcome in terms of medical risk is illustrated with analyses of data from a published study of the efficacy of mammography and from an unpublished study of deficiencies in fetal heart rate monitoring in a consecutive sample of deliveries with poor outcomes. The findings of the latter study raise serious questions about the validity of prior non-experimental studies on the efficacy of fetal monitoring. The use of predictive values is illustrated with an analysis of the strength of conclusions about deficiencies in patients' pre-hospital care based on the severity of disease at the time of admission to hospital.

RECORD NO. H503087 CATEGORY: QUALITY OF CARE - MONITORING TECHNIQUES

TITLE: Ambulatory Care Medical Audit Demonstration Project

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-78	09-29-82	340,284	568,945	1,290,417

INVESTIGATOR NAME AND ADDRESS

PALMER, R HEATHER
HARVARD UNIVERSITY
677 HUNTINGTON AVENUE
BOSTON
MASSACHUSETTS 02115

OBJECTIVE:
To demonstrate the feasibility of medical record audit using explicit process criteria across multiple ambulatory care sites as an effective and efficient quality assurance system.

APPROACH:
The project is being conducted in eleven ambulatory care sites (four teaching hospitals and seven neighborhood health centers). An assessment will be made of the effectiveness of a cyclic quality assurance program which employs information feedback in an effort to change provider behavior toward compliance with criteria. A controlled experimental trial will be used to evaluate the effectiveness of the feedback loop and providers will be assigned a priori to experimental or control status for one or two sets of audit topics. Interventions being studied include: announcement of audit topic, adoption of criteria, feedback of audit results, administrative changes, and lapse of time without further intervention. Detailed cost diaries are maintained in order to assess direct costs of the routine use of this mode of audit and efforts will be made to estimate indirect and intangible costs.

FINDINGS:
The intent of this study is to test the feasibility and effectiveness of an accepted mode of quality assurance and the results will be useful to both health policy makers and provider groups. If the system proves successful, it can be promoted and tested over a wider base; however, if not successful, it should provide a warning to policy makers before wide-scale implementation under PSRO. Progress to date includes the selection and acceptance of nine audit topics, development and adoption of criteria, strengthening of audit interventions, documentation of provider reactions to audit, and initiation of two audit cycles staggered in time. No study results are presently available.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03115 CATEGORY: QUALITY OF CARE - MONITORING TECHNIQUES

TITLE: Improving Clinical Decision Making in Arthritis

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
08-01-78	07-31-81	147,181	277,871	435,071

INVESTIGATOR NAME AND ADDRESS

LEVY, JOSHUA
UNIVERSITY OF CALIFORNIA LOS ANGELES
405 HILGARD AVE
LOS ANGELES
CALIFORNIA 90024

OBJECTIVE:
To develop a computer based diagnostic system for arthritis (ADS), for aiding physicians to improve clinical diagnostic accuracy and improving the cost effectiveness of diagnostic evaluation of patients with arthritic disorders.

APPROACH:
The knowledge base currently consists of prior probabilities obtained from a data base and conditional probabilities of 187 features of 14 disorders obtained subjectively from rheumatology experts. The P.I. has designed, implemented, and tested algorithms for information acquisition and update of disorder probability. A four part questionnaire has been developed for better understanding the process of clinical decision making in arthritis and to develop a broad base for subjective input of feature sensitivity and specificity. Methods are being developed for validating the algorithms, determining a non-parametric approach for determining the most valuable clinical variables, mathematical aggregation approaches for the subjective estimates of the conditional probabilities, and for evaluating the ability of the system to teach and improve overall risk and cost-effectiveness of physicians in selecting tests and procedures.

FINDINGS:
The successful implementation of algorithms to more accurately and efficiently define correct diagnoses and allow clinicians to determine the optimal path towards evaluation and confirmation of a diagnostic hypothesis would clearly have a significant impact on quality of care as well as decreasing the cost of diagnostic workup. The computer programs to test these hypotheses in arthritic disorders are to be quite general and hopefully extrapolated to other disease specialties.

RECORD NO. H00279 CATEGORY: QUALITY OF CARE - MONITORING TECHNIQUES

TITLE: Influence of Continuing Medical Education on Medical Audit

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	09-29-81	151,019	151,019	301,660

INVESTIGATOR NAME AND ADDRESS

BUNKER, JOHN P
STANFORD UNIVERSITY

STANFORD
CALIFORNIA 94305

OBJECTIVE:
To examine empirically the importance of the insufficiency of scientific evidence underlying decisions and the inadequacy of chart information for the purpose of evaluating these decisions. This is a revision of the original objective: to teach physicians in community hospitals to use better criteria in evaluating patient care. The revised approach reflects this change.

APPROACH:
Medical audits on hysterectomies, allopurinol usage, and acute asthma in children will be limited to the Stanford University Hospital. Empirical criteria will be developed and compared with criteria used by the Stanford staff in medical audits.

FINDINGS:
The science based criteria and the control criteria will be ranked according to medical significance, and based on these two assessments of significance, the importance of each criterion will be characterized.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03985 CATEGORY: QUALITY OF CARE - MONITORING TECHNIQUES

TITLE: The Effect of Education on Drug Utilization

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-80	52,031	52,031	52,031	MEYER, THOMAS C UNIVERSITY OF WISCONSIN MADISON 500 LINCOLN DR MADISON WISCONSIN 53706

OBJECTIVE:
To determine the effectiveness that the drug utilization review process has on improving the quality of prescribing drugs; to compare specifically defined improvement categories; and to perform a one-year cost benefit analysis of educational intervention programs.

APPROACH:
Process measures on five drugs selected from a priority listing developed by the research staff was studied to determine the effectiveness of education intervention. The study population were patients admitted to the University of Wisconsin Hospital, who have been administered one or more of the study drugs. Analysis of the data focussed on the qualitative effect of educational intervention, comparison of effect between therapeutic categories; changes in prescribing behavior; and cost analysis of personnel expenses, drug costs, and other "measurable economic factors". This study is intended to provide hospitals in the State of Wisconsin a methodology (data collection and analysis) for evaluating drug utilization review program. The methodology proposed for evaluating educational intervention was considered to have the potential for use in improving drug prescribing protocols in selected therapeutic categories; and what drugs are inappropriate for certain interventions.

FINDINGS:
This study is considered by the investigators to be inconclusive due to the fact that there are minimal variations in the hospital's prescribing practice from the acceptance criteria for use of the drugs selected for organized educational interventions. Only one (diazepam) of the five drugs selected (Cimetidine, Morphine, Furosemide, Propranolol) was deemed appropriate for intervention. The investigation, utilizing data from this study and follow-up data from previous studies, arrive at the following conclusions: prospective drug utilization review in a university teaching setting is mandatory; drug prescribing behavior change in this setting occurs only with constant reinforcement; prospective DUR is an effective method of post-marketing surveillance of actual drug use, an effective Pharmacy and Therapeutics Committee which controls a tight formulary system contributes significantly to appropriate prescribing; physicians in the University Hospital are not being specific as to their reasons for prescribing diazepam, furosemide, and morphine, appropriate prophylactic use of antibiotics remains an ongoing problem; (Cimetidine is currently being acceptably used for a much wider range of conditions than those for which it is FDA approved).

CATEGORY: QUALITY OF CARE - HEALTH STATUS

TITLE: Construction of a Health Status Index

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-71	10-31-79	0	951,326	951,326

INVESTIGATOR NAME AND ADDRESS

BUSH, JAMES W
UNIVERSITY OF CALIFORNIA SAN DIEGO

LA JOLLA
CALIFORNIA 92093

OBJECTIVE:
To provide an indicator of health status in a population as an empirical tool for health services planning by tracking the improvement of individuals' capacity to function in their social roles.

APPROACH:
The index consists of four operational components: a measure of functional status based on mobility, social activity, and symptom-problem complex; a set of relative social valuations associated with each level of functional status; indicators of prognosis, and a single, composite value based on the first three components. The index will be based on data from the Los Angeles Metropolitan Area Survey and on field interviews to ascertain social valuation of functional health status.

FINDINGS:
The development of a framework for the measurement of functional status level and prognosis of quality-adjusted life expectancy is relevant to health service policy, planners, resource allocation and as a means of assessing the effectiveness of selected treatment or preventive medical care programs.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS00368 CATEGORY: QUALITY OF CARE - EVALUATION OF SYSTEM & ORGANIZATION PERFORMANCE

TITLE: Human Population Laboratory for Epidemiologic Studies

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
10-01-67	07-31-80	100,000	1,944,191	1,944,191

INVESTIGATOR NAME AND ADDRESS

HOLLISTER, A C
CALIFORNIA STATE DEPARTMENT OF HEALTH
2151 BERKELEY WAY
BERKELEY
CALIFORNIA 94704

OBJECTIVE:
To determine the incidence and outcomes of diseases in relation to stress, health behavior and medical care in a large urban county by means of an intensive population health survey, combined with other data on the same area.

APPROACH:
Beginning in 1959 an ongoing study of Alameda County has been conducted by the California State Health department, first collecting extensive background data on the area and then conducting a survey of 7,000 residents in 1965. In 1974 a resurvey was conducted making possible a longitudinal study of changes in health status over a ten year period for determining the relationship between stress, health behavior, preventive measures, disease incidence and medical care. Trends in community wide health status were also analyzed for correlations with socio-demographic and health care trends.

FINDINGS:
Determination of the long term influences of lifestyle, health behavior and medical care on psychic and physical health status of a population could provide guidance in setting priorities for utilizing health resources most effectively.

RECORD NO. H503183 CATEGORY: QUALITY OF CARE - EVALUATION OF SYSTEM & ORGANIZATION PERFORMANCE

TITLE: Specialized vs. General Unit Systems in Psychiatric Hospitals

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-78	06-30-80	0	15,238	15,238

INVESTIGATOR NAME AND ADDRESS

SELDEN, JOHN W
INDIVIDUAL AWARD--SELDEN, JOHN W.
1300 CINCINNATI ST
LAFAYETTE
INDIANA 47904

OBJECTIVE:
To do an evaluation research project using patient outcome to assess two types of psychiatric hospital organization, specialized treatment units and general units.

APPROACH:
Questionnaire data and medical records for approximately 1,700 patients discharged from two hospitals in Illinois and Indiana from August, 1974 to December, 1978 will be used to compare one hospital which changed from the general unit system to a specialized unit system to the other hospital which did not undergo a reorganization. Patient outcomes will be measured by length of stay and recidivism statistics. Time series analysis, field interviews, and questionnaires mailed to the patients' closest relative will provide additional information.

FINDINGS:
The investigaotr reports that his findings indicate that ward specialization per se had little effect upon any of the outcome measures-length of hospital stay, recidivism rate, or post-hospital community adjustment. What effect was found, on different groups of patients, was thought to be the result of the specific aspects of the particular hospital reorganization and the coincidental changes in administrative policies. As in other types of reorganizations, lack of line staff input resulted in considerable staff opposition, temporary disorganization and low morale, which was reflected in a temporary lengthening of hospital stay for patients on some of the wards.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03572 CATEGORY: QUALITY OF CARE - EVALUATION OF SYSTEM & ORGANIZATION PERFORMANCE

TITLE: Factors Related to the Treatment of Gallbladder Disease

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
03-01-79	01-31-80	21,125	21,125	21,125

INVESTIGATOR NAME AND ADDRESS

RUBERMAN, WILLIAM
HEALTH INSURANCE PLAN OF GREATER N Y
625 MADISON AVE
NEW YORK
NEW YORK 10022

OBJECTIVE:
To determine cholecystectomy rates across medical groups is a large medical care plan; to assess the relationship between these rates and patient and provider characteristics and to assess the feasibility of an intensive prospective study of the factors related to treatment and prognosis of gallbladder disease.

APPROACH:
The study will utilize the data base of the Health Insurance Plan of Greater New York (HIP)--hospitalization, surgical reports, and medical records of patients with gallbladder X-rays. Characteristics of the HIP members and of the various medical groups are available to calculate the relationship of cholecystectomy rates and factors of interest. X-ray reports and surgical records will be used to retrospectively determine the numbers of patients who are treated by surgery in a specific time period after their diagnosis.

FINDINGS:
Since gallbladder surgery is one of the major elective types of surgery in the U.S., signigicant resources in terms of both manpower and money are allocated for a variety of treatments. This study will provide preliminary data on some factors associated with variations in cholecystectomy rates within a population served by one medical care organization and will provide the basis for a careful, prospective study of factors related to the treatment and outcome of gallbladder disease.

RECORD NO. HS03576 CATEGORY: QUALITY OF CARE - EVALUATION OF SYSTEM & ORGANIZATION PERFORMANCE

TITLE: Obstetrical Practice and Perinatal Outcome

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	09-30-81	43,920	43,920	43,920

INVESTIGATOR NAME AND ADDRESS

GITTELSOHN, ALAN M
JOHNS HOPKINS UNIVERSITY
CHARLES AND 34TH STS
BALTIMORE
MARYLAND 21218

OBJECTIVE:
To organize natality data bases which will permit exploration of a series of questions pertaining to obstetrical practice and perinatal outcomes. From these data an attempt will be made to study trends in rates of neonatal mortality and morbidity and of obstetrical practices and processes, adjusted for relative risk.

APPROACH:
This effort will include a literature review of fetal monitoring, cesarean section, induction of labor, instrument delivery, and anesthesia use; the acquisition, documentation, and formatting of vital records and hospitalization files from 7 areas of the U.S. and aggregated data from Norway and England pertaining to births, infant deaths and obstetric practice for the period 1969-1977. These data cover a wide variety of demographic circumstances and a range of practice settings including high technology university centers, small community hospitals, birthing centers and home delivery. A variety of analytic techniques will be applied to the data to compute trends in obstetric practice and a variety of perinatal outcomes.

FINDINGS:
Over the past decade there have been marked alterations in obstetrical practice including increased use of fetal monitoring, induction techniques, and cesarean sections. A multitude of questions have been posed about the risks and benefits of these procedures. This research is expected to contribute to a resolution of the debate concerning high technology obstetric procedures and ultimately to policy concerning their reimbursement and standards for their appropriate use.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03712 CATEGORY: QUALITY OF CARE - EVALUATION OF SYSTEM & ORGANIZATION PERFORMANCE

TITLE: Holistic Health Center Orientations and Characteristics

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-01-79	05-31-80	9,166	9,166	9,166

INVESTIGATOR NAME AND ADDRESS

NEWPORT, JOHN F
INDIVIDUAL AWARD--NEWPORT, JOHN F.
10751 ROSE AVE, RM 225
LOS ANGELES
CALIFORNIA 90034

OBJECTIVE:
To identify, describe, and analyze the basic characteristics and service orientation of various holistic health center models. These centers will be systematically investigated to determine what is being done, who is being served and the extent to which their programs relate to more conventional health providers.

APPROACH:
A study sample of seven models classified by type of service given has been selected to represent the basic prototypes which seem to have evolved. Each center will be visited and approximately one week will be spent in obtaining structured interviews with key staff, observation of programs, and retrieval and development of data pertaining to the center's programs.

FINDINGS:
At the present time there is a great deal of confusion within the health care community regarding the evolving concept of holistic health as a possible alternate method of delivery of health care. It does have the potential for exerting a major influence on the delivery of health care. This study, although small, will provide a description and an analysis of what presently exists and provide some guidelines for considering the holistic health care movement in perspective. The study will produce a typology of holistic health centers.

RECORD NO. HS03762 CATEGORY: QUALITY OF CARE - EVALUATION OF SYSTEM & ORGANIZATION PERFORMANCE

TITLE: Evaluation Study of an Alternative Birthing Center

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-81	128,388	128,388	256,948	BARUFFI, GIGLIOLA JOHNS HOPKINS UNIVERSITY CHARLES AND 34TH STS BALTIMORE MARYLAND 21218

OBJECTIVE:
To evaluate the outcomes of two different forms of pregnancy care comparing birth outcomes in a maternity center (out of hospital) with births in a tertiary care facility.

APPROACH:
Utilizing medical records to select a stratified random sample of 800 experimentals and a similar number of controls, the study will evaluate outcomes of pregnancy care rendered at two different birthing facilities in Philadelphia, PA. The study will compare outcomes at Booth Maternity Center and Thomas Jefferson Medical Center utilizing a previously developed and tested rating scale (Hobel's). The study will additionally seek to evaluate the medical risk of transfer from Booth Maternity Center to Thomas Jefferson University Medical Center in the event of pregnancy complication. Data will be analyzed using univariate and multivariate processes.

FINDINGS:
The study will address a major issue of quality of care delivered in two types of birthing facilities. Results may have implications for reimbursement under Title XIX.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 233793019 CATEGORY: QUALITY OF CARE - EVALUATION OF SYSTEM & ORGANIZATION PERFORMANCE

TITLE: Encouraging Appropriate Care for the Chronically Ill Elderly

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	06-30-83	833,811	833,811	3,380,112	SKINNER, DOUGLAS APPLIED MANAGEMENT SCIENCES INC 962 WAYNE AVE SILVER SPRING MARYLAND 20910

OBJECTIVE:
Goals of the study are more appropriate use of nursing homes, better outcomes in nursing home patients, and reduction of hospital back-ups.

APPROACH:
Nursing homes will be paid bonuses for admission of "heavy care" patients, and for meeting patients care goals including discharge. Size of the bonus will be determined by the level of dependency a patient suffered at admission. Outcome payments will be contingent upon appropriate patient outcomes such as improvement, maintenance, or discharge. More than 3,600 patients will be studied in 48 homes in 2 cities (24 per city). Half the homes will receive the bonuses, while the other half will be a control group. A randomized experiment with repeat measures in a three factorial design will be employed. Nursing home staffs will assess patients, set goals, and review goal attainment. These will be validated by study staff functioning in the role of assessors. Only valid and appropriate assessments,goals, and performance will be acceptable for bonuses purposes. Work sampling will measure minutes of direct patient care controlling for patient characteristics. The Contractor will provide data collection and processing services only. Analyses will be conducted by NCHSR intramural staff.

FINDINGS:
Data collection is scheduled to begin in October, 1980. Preliminary findings will be available in Fall, 1982. The report will cover treatment impacts upon nursing home case mix, patient outcomes in ADL functioning, mental functioning, general well-being, mortality, and length of stay, as well as length of stay in hospitals serving the nursing homes.

RECORD NO. HS02027 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: A Patient Care Quality Assurance System

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
02-01-76	01-31-80	11,619	573,726	573,726

INVESTIGATOR NAME AND ADDRESS

GALL, JOHN E, JR
EL CAMINO HOSPITAL
2500 GRANT RD
MOUNTAIN VIEW
CALIFORNIA 94040

OBJECTIVE:
To design, implement, and evaluate a computer-assisted patient care quality assurance system.

APPROACH:
The quality assurance system will be integrated into the existing total-hospital medical information system at El Camino Hospital and will comprise four sub-systems: 1) outcomes-oriented nursing care planning, 2) patient care audit, 3) staffing requirements, and 4) services coordination.

FINDINGS:
Grantee expects to demonstrate cost-benefits of system for improving resource utilization, staffing patterns, planning and patient care by focusing on patient outcomes.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02638 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: Multidimensional Health Locus of Control Scales

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-01-77	02-29-80	0	76,826	76,826

INVESTIGATOR NAME AND ADDRESS

WALLSTON, B S
GEORGE PEABODY COLLEGE FOR TEACHERS

NASHVILLE
TENNESSEE 37203

OBJECTIVE:
To develop and test an instrument for predicting health behavior, multidimensional health locus of control scales.

APPROACH:
The psychological concept of locus of control concerns an individual's expectations about the effectiveness of their own behavior in controlling what happens to them. Locus of control is usually conceptualized as a dimension ranging from internal to external control. This study will reanalyze existing locus of control data, develop and refine a locus of control scale to relate specifically to health, test the validity of this new scale, and demonstrate the usefulness of such scales. For example, health related messages can be tailored to appeal to individuals identified by the scale.

FINDINGS:
This health locus of control scale will be useful for identifying health beliefs, predicting some aspects of individuals' health related behaviors, designing appropriate health education and treatment programs, and evaluating self-care programs.

RECORD NO. HS02738 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: Optimization Models for Management Decision-making

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-01-77	08-31-81	76,895	191,595	289,785

INVESTIGATOR NAME AND ADDRESS

WILSON, EDWARD C
ALBEMARLE COUNTY MEDICAL SOCIETY
BOX 744
CHARLOTTESVILLE
VIRGINIA 22901

OBJECTIVE:
To develop optimization models for physician decision-making for the evaluation of four complaints common to ambulatory practice in such a manner as to reduce physician uncertainty at minimal dollar cost.

APPROACH:
A probability-based optimization model has been developed for use as a decision aid for diagnosis and treatment of ambulatory care problems. Data for the model have been assembled for the complaint of diarrhea through a combination of expert opinion and literature search and will eventually be compared to actual data base experience in order to determine optimal probabilities for medical process paths while keeping minimal cost in mind. The intent is to extend this methodology to other common complaints comprising 16% of ambulatory practice and to eventually assess its utility in the educational process.

FINDINGS:
This study will cast light on the value of actuarial data-based estimation procedures as compared to protocols based on expert opinion. It will also define the optimal care process for a common ambulatory problem wherein the value system is reduction in physician uncertainty at minimal dollar cost and will be useful for audit and educational purposes. An optimization model has been developed for the treatment of diarrhea and preliminary tests have shown it to reliably simulate expert medical opinion. The model has been implemented and tested on a desk-top microprocessor. Efforts, in the fourth and final year of this project, will continue along the line of descriptive and prescriptive function validation. Clinical data will be obtained prospectively from an operating ambulatory care practice located several miles away as part of the evaluation process.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02863 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: Parents of Diabetic Children and Medical Compliance

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-77	05-31-80	0	41,181	41,181	JOHNSON, KATRINA W UNIVERSITY OF NOTRE DAME NOTRE DAME INDIANA 46556

OBJECTIVE:
To determine how knowledge and attitudes of parents and physicians affect their expectations of "normalcy" and medical compliance.

APPROACH:
Diabetic children's parents and their physicians will be interviewed to test 8 hypotheses about the relation between knowledge of diabetes, and compliance, expectations of "normalcy", and physicians' expectations of compliance and medical control of diabetes.

FINDINGS:
Findings suggest a diabetic child's family is pressured to be vigilant in carrying out a regimen, but simultaneously pressured to regard child as normal. It seems that parents without a family history of diabetes and who experienced a stressful onset of diabetes are more compliant with a prescribed regimen. Families of young diabetics found greatest impact of disease in needs to maintain a scheduled regular life style. (Fifty-five diabetic children, 110 parents and 27 physicians are in the study.)

TITLE: Challenging M.D. Authority and Utilization

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-77	03-31-80	17,368	102,110	102,110

INVESTIGATOR NAME AND ADDRESS

HAUG, MARIE R
CASE WESTERN RESERVE UNIVERSITY
UNIVERSITY CIR
CLEVELAND
OHIO 44106

OBJECTIVE:
To examine the effect of consumerism on the willingness to challenge professional claims to authority and on the utilization of health services.

APPROACH:
The data for the study will be collected as part of national sample survey of 1500 adults scheduled to be conducted by the National Opinion Research Center in the Spring of 1978. Ten to 12 minutes of questions will be purchased for this study including attitudes toward patient's rights, validity of professional authority, health knowledge and status, and recent health behavior.

FINDINGS:
This researcher's previous study found that young, more educated persons were more likely to challenge solo practitioners as well as group practice physicians. The major hypothesis to be tested is that patients most inclined to challenge physicians are least likely to go to a physician for trivial complaints but also least likely to see a physician for preventive services. Consumer attitudes might be a point of influence in affecting utilization of preventive and treatment services.

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NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03029 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: Support Systems, Stress, and Primary Health Care

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
03-01-79	02-28-82	148,377	148,377	401,934	GORTMAKER, STEVEN L HARVARD UNIVERSITY BOSTON CAMPUSES BOSTON MASSACHUSETTS 02115

OBJECTIVE:
To analyze the roles of stress and social support in utilization of health services in primary care settings and to lay the groundwork for development of an intervention strategy to reach people in perceived stressful situations who might benefit from social support. The proposal grew out of the principal investigator's previous work with families.

APPROACH:
The proposal addresses these issues: Definition and measurement of the concepts of social support and stress; the relationship between the occurrence of stressful life events and use of primary care services; the effectiveness of social support in ameliorating the negative effects of stressful life events and, therefore, use of health services; assessment of changes in stress and support systems over time and determination of how these relate to primary care utilization. These issues will be addressed through the use of interviews, diaries and medical record reviews of 300 to 450 patients who will be followed for one year. Diaries have been completed by a random sample of patients.

FINDINGS:
The first wave of interviews was completed in May of 1980 with a completion rate of 80%. The 100 diaries were returned with a completion rate of 85%. These are unusually good return rates. Medical utilization will be cross validated with patient's self reports, diary data, two interviews, and a medical record review, one year prior to study and the year during study. Stress and social support measurement models have been developed. This study will provide new knowledge and methodological techniques in an area where such contributions are sorely needed. The relationships of stress and social support to medical care utilization behavior will be valuable for health services planning.

TITLE: Verbal Interactions and Health Outcomes by Age Groups

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-01-79	09-29-81	116,650	116,650	273,373

INVESTIGATOR NAME AND ADDRESS

PUTNAM, SAMUEL M
UNIVERSITY OF NORTH CAROLINA CHAPEL HILL

CHAPEL HILL
NORTH CAROLINA 27514

OBJECTIVE:
To validate a new taxonomy for coding patient-physician verbal interactions and to relate them to patient satisfaction, compliance, and health status; and to develop as well as pilot test a method of training physicians in interviewing skills based on the principles of the taxonomy.

APPROACH:
Data will be obtained in two phases. In Phase I, ten (10) physicians are studied, each of whom will see sixteen (16) patients (160 interactions) from the walk-in clinic. These visits are tape recorded, transcribed, and coded according to specified outcomes. Phase II consists of a clinical trial of the usefulness of training physicians in the use of verbal response modes (SVRM) to determine if such use improves patient satisfaction, compliance and health outcomes. The ten physicians from Phase I will be randomly assigned between treatment and control groups, while ten additional physicians will be randomly allocated between groups. The treatment group will be given only non-directive attention. Each physician will see twelve patients for an initial and follow-up visit. A comparison of patient outcomes of each group of physicians will be made.

FINDINGS:
This study, the first which attempts to show that training physicians in interviewing makes a difference in the health outcomes of their patients, has implications for changing provider attitudes and behavior thereby increasing physicians capability to provide quality care, as well as cost savings, and lower incidence of malpractice suits. Cost savings are possible as physicians order fewer tests, and take a more careful history.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03222 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: Claims-File Research: Pediatric Health Care Quality

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-78	02-28-80	50,622	143,859	143,859	RAY, WAYNE A VANDERBILT UNIVERSITY NASHVILLE TENNESSEE 37240

OBJECTIVE:
To study the prescribing of psychotropic and anti-infective drugs to Medicaid-eligible children in Tennessee.

APPROACH:
An estimated 2 million prescriptions for the 200,000 children eligible for Medicaid in Tennessee over the five year period 1973-1978 will be analyzed using computer techniques. Two indices of drug use will be computed, prescription incidence and prescription utilization ratios, and will be examined in terms of age, sex, race, and urban/rural location. Physician training and characteristics of current practice will be correlated with prescribing of psychotropic drugs. The association of inappropriate anti-infective prescribing with psychotropic prescribing will be tested.

FINDINGS:
This research will supply currently unavailable data on drug use among children; it has implications for improving the quality and economy of government provided medical care for children, improving physician prescribing practices, and developing health services research methodology.

RECORD NO. HS03575 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: RCT of Informed Consent for Elective Surgery

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
02-01-79	12-31-80	52,775	52,775	52,775

INVESTIGATOR NAME AND ADDRESS

BUNKER, JOHN P
STANFORD UNIVERSITY
703 WELCH RD., SUITE G-1
STANFORD
CALIFORNIA 94305

OBJECTIVE:
This study will evaluate the impact of new informed consent procedures used in elective surgery through identification of their effect on patient understanding, attitudes, and behavior.

APPROACH:
The specific differences to be assessed, by means of a randomized controlled trial, include: (1) patient's level of knowledge of risks, benefits and alternatives; (2) patient's perception of and attitudes toward participation in decision-making; (3) patient's additional information-seeking behaviors; (4) patient's evaluation of spouse's involvement; (5) patient's anxiety levels before and after surgery; (6) patient's satisfaction with physician-patient communication; (7) physician's satisfaction with physician-patient communication. Other indicators to be monitored include: (1) morbidity levels/complication types and rates; (2) recovery time; (3) refusal rates of surgery.

FINDINGS:
This study is the first of its kind to analyze the impact of the informed consent process from the communication perspective. It tests a potentially more useful model for informed consent in elective surgery and has been developed using insights and observations from what is known about learning and decision-making from the social sciences. As increasing numbers of questions are raised concerning elective surgery levels nation-wide, it will become imperative to document the role of the informed patient/consumer in this process.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03599 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: A Profile-Based Dental Utilization Review System

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-82	221,121	221,121	693,817	BAILIT, HOWARD L UNIVERSITY OF CONNECTICUT HEALTH CENTER FARMINGTON AVE FARMINGTON CONNECTICUT 06032

OBJECTIVE:
To evaluate the cost effectiveness of a utilization review (UR) system based on information derived from dental practice profiles and to gain basic knowledge of UR methods related to practice profiles and the prospective review of claims.

APPROACH:
Practice profiles will be developed from insurance claims obtained from two major carriers for 1000 dentists in order to identify potential overutilizers. These dentists will be sent letters informing them of their unusual practice patterns and future practice will be monitored for improvement. Non-responders will be sent additional letters and all of their claims will receive pretreatment review rather than the normal 3-5%. The cost effectiveness of this system will be evaluated in light of the existing UR system.

FINDINGS:
It is expected that this profile-based UR system will prove to be more cost effective than present methods and that it will provide answers to the root cause(s) of over-utilization of dental services. The results should prove to be of value to PSROs with the potential interest in including dental services review and in the development of national health insurance policy. Progress to date includes selection of 1100 dentists from three insurance plans, identification of over-utilized dental services for profiling, development of dentist utilization profiles, and initiation of data collection.

RECORD NO. HS03693 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: Prediction of Cost-Effective Stroke Rehabilitation

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-79	04-30-81	15,808	15,808	15,808	JOHNSTON, MARK V CLAREMONT GRADUATE SCHOOL CLAREMONT CALIFORNIA 91711

OBJECTIVE:
To develop models and methodology for the prediction of outcomes and costs of stroke rehabilitation.

APPROACH:
Multiple predictor variables will be coded for all patients at admission to the stroke rehabilitation unit at a hospital in California using the format of an ongoing Hospital Utilization Project. These variables will include age, prior living arrangement, ICDA diagnoses, and functional status--including rated independence in self care, mobility, and continence, among others. At discharge, a vector of health outcome variables (e.g., functional status) and costs (e.g., monetary, therapy hours, length of stay) will be measured. In addition, a three month post-discharge follow-up of all admitted patients will be conducted by mail, with supplementary telephone contact. Post-discharge cards and functional status after discharge also will be assessed. Multivariate analysis will be used to develop predictors both of health status outcomes and costs, both in-hospital and post-discharge. The models developed in this prospective study will be partially cross-validated or compared with previous year data from the Hospital Utilization Project.

FINDINGS:
This research is expected to provide a clinically useful tool in making resource allocation decisions for the treatment of stroke victims.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 233793008 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: Description, Analysis and Assessment of Health Hazard/Risk Appraisal (HHA) Programs

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	03-13-81	155,382	155,382	155,382	BEERY, WILLIAM L UNIVERSITY OF NORTH CAROLINA CHASE HALL CHAPEL HILL NORTH CAROLINA 27514

OBJECTIVE:
This study will provide an analysis, and a description of the current use and types of HHA application.

APPROACH:
The methods include: literature review, consultation with HHA experts, and site visits to selected HHA programs to identify and secure descriptive and analytical data for secondary analysis. The influence of such factors as: sponsorship, setting, conditions under which HHA is administered, linkages to other health promotion and disease prevention activities and the health delivery system will be investigated. An evaluation of costs and benefits will be made to provide a basis for judging whether and under what conditions HHA should be supported either by Federal and/or private sources. Suggestions of areas needing further research will be delineated.

FINDINGS:
An annotated analytical review of the literature, both published and unpublished has been completed. The analysis includes: the historical development of HHA, a matrix comparing the components and the characteristics of the thirteen HHA instruments, and the scientific basis used for risk estimation update and risk factor reduction. Approximately 275 HHA programs were identified, criteria were developed to select fifteen of these programs for site visits. A field protocol has been developed and pretested. Five site visits have been made.

RECORD NO. HS02654 CATEGORY: QUALITY OF CARE - MALPRACTICE

TITLE: Health Dispute Resolution: Methods and Case Experience

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-77	06-30-81	90,458	226,273	289,581

INVESTIGATOR NAME AND ADDRESS

LADIMER, IRVING
AMERICAN ARBITRATION ASSOCIATION
140 W 51ST ST
NEW YORK
NEW YORK 10020

OBJECTIVE:
To develop a data base on medical malpractice claims entering the arbitration forum, and to undertake comparative analyses of cases falling under the jurisdiction of two forums: arbitration and litigation.

APPROACH:
Currently there are 15 statewide or local private programs for malpractice arbitration. These 15 private programs are in 10 states. The total number of cases expected to be available for either the comparative or intra-forum analyses is 300. Of these, approximately 235 are expected to be California or Michigan cases. A much larger number of cases on litigation from these two jurisdictions would be available from the tapes of the National Association of Insurance Commissioners (NAIC).

FINDINGS:
As of July, 1979 the Medical Malpractice Arbitration Research Data Base included 205 closed cases. These occurred over 12 years, between 1967 and 1978; but more than 75% occurred in the five-year period 1973 through 1977. About 52% of the 205 cases resulted in arbitral awards. The median time from claim-producing incident to case closure was 27 months. This overall time was affected, in more than 60% of the cases, by claimant's filing of a lawsuit prior to the initiation of arbitration. In half of such cases, nine months passed after the filing of suit before arbitration was initiated. The median time from initiation to conclusion of arbitration, was 9 months.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02887 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Decision-Making in Jewish Law Pertaining to Medicine

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-77	09-30-80	0	51,793	51,793

INVESTIGATOR NAME AND ADDRESS

STERN, JOSEPH B
BOSTON COLLEGE

CHESTNUT HILL
MASSACHUSETTS 02167

OBJECTIVE:
To examine the accumulated experience of two thousand years of decision making in Jewish ethical-legal tradition relative to health and medical issues, and to develop a method for teaching ethical procedures for medical decision-making and guidelines for policy formulation in the medical setting.

APPROACH:
Relevant aspects of Jewish Law (Halakkah), namely the Responsa literature (legal-moral precedents) relating to medical issues will be reviewed for the purpose of developing a typology of cases. The religious, legal or ethical import of these cases will be minutely examined and clarified with collaborating physicians. The Responsa literature will be searched by computer and relevant cases and decisions extracted. A set of normative criteria will be developed to analyze cases and ultimately a set of tested analytical algorithms will be developed based on the Responsa which will have value for medical decision-making.

FINDINGS:
The objective is the development of analytical algorithms, based on Jewish legal-ethical precedent, which will have applicability and value for modern medical decision-making.

RECORD NO. HS03269 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Quantitative Measurement of Quality of Medical Care

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
01-01-79	03-31-80	59,562	59,562	59,562

INVESTIGATOR NAME AND ADDRESS

KOCH-WESER, DIETER
HARVARD UNIVERSITY

BOSTON
MASSACHUSETTS 02115

OBJECTIVE:
To analyze and disseminate information concerning the application of Sentinel Health Events (SHE), a clinical method that measures the quality of medical care by counting cases of unnecessary disease, disability, and untimely deaths.

APPROACH:
A "clearinghouse" will be created in order to disseminate information on SHE. A compendium of studies and description of the use of SHE will be prepared. The study will search out and assist by means of consultation with new applications of SHE methodology, periodically assess these applications and assist Federal agencies in experimentation with SHE method. Methodological issues associated with disease classification and revisions to the International Classification of Diseases (ICD) will be resolved. Analyses and demonstrations will include studies of unnecessary disease, disability, and untimely death in discharge diagnoses and the effectiveness of various therapeutic programs including response to treatment and cause of death within well-defined populations groups. Published reports of studies employing SHE methodology will be evaluated in conjunction with a Working Group on Preventive and Manageable Diseases.

FINDINGS:
The dissemination, consultation, demonstration, and evaluation components of this study will enhance implementation of SHE methodology in a variety of settings and across many disease categories. The National Center for Health Statistics and the Health Care Financing Administration have expressed interest in SHE. The SHE approach will lead to an improvement in the methods currently used to quantify health status and the effects of medical care intervention.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03271 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Third Biennial Conference on Health Survey Research Methods

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-78	03-31-80	9,450	34,950	34,950	SUDMAN, SEYMOUR UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN URBANA ILLINOIS 61801

OBJECTIVE:
To conduct a conference on research design and methodology addressing methodological and technical issues in health survey research methods. The goals of the conference are to identify and stimulate research in key areas; bring unpublished scientific and technical work to the attention of professionals; and to suggest and recommend new areas of research needs.

APPROACH:
A two and one-half day conference will be held with research methodologists active in the health field, policy makers, and government representatives. Background papers prepared for the conference and group discussions will address the criteria for selecting research priorities and propose a research agenda. A monograph of the proceedings will be published for wide distribution to survey researchers, users of survey data in the health field, and policy-makers and funding agencies in the health field.

FINDINGS:
A research agenda in the form of recommendations to the government and to the research methodologists themselves has been developed and will be disseminated via NCHSR Research Proceeding Series, in press.

RECORD NO. HS03995 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Use of Health Services: Revised Research Bibliography

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-79	10-31-80	52,579	52,579	57,517	EICHHORN, ROBERT L PURDUE UNIVERSITY WEST LAFAYETTE INDIANA 47907

OBJECTIVE:
To revise and update The Utilization of Health Services: Indices and Correlates, co-authored by Lu Ann Aday and Robert L. Eichhorn, and published by NCHSR in 1972 (DHEW Pub. No. HSM 73-3003).

APPROACH:
The grantee will review the research literature for 1971-1979 to uncover new utilization studies; review the 207 abstracts presently included in the bibliography, purging those that are out of date, methodologically unsophisticated by today's standards, and irrelevant to current research and policy issues; re-examine the indices and correlates of utilizations that were employed in the 1972 bibliography, and add new measures and predictors of use that have entered the literature; and put the revised bibliography into a computerized format. This approach allows for better indexing and the development of a keyword system which simplifies the task of updating the bibliography in the future.

FINDINGS:
The significance of this research lies in its emphasis on providing a rigorous ordering of the best of the utilization literature. The typologies of indices and correlates, selected trends and summarized findings will be useful to both researchers and decision makers.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 233783013 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Est the Costs of Selected Medical Events Known or Suspected to be Related to the Administration of Specified Vaccines

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-78	12-31-79	0	187,635	187,635	BENTKOVER, JUDITH D LITTLE, ARTHUR D., INC ACORN PARK CAMBRIDGE MASSACHUSETTS 02140

OBJECTIVE:
To estimate the economic costs associated with medical problems experienced by recipients of commonly used vaccines.

APPROACH:
The approach involves two phases: first, development of a series of medical event profiles for the range of outcomes likely to be associated with 17 selected medical events known or suspected to be related to the administration of commonly used vaccines; and second, development of estimates of the direct and indirect costs incurred as a consequence of each medical event, including medical care utilization, work loss, and premature death.

FINDINGS:
This analysis will aid in the planning of a program that provides for the compensation of persons who hold the government table for adverse reactions following immunization. The results of this study will also serve as a measure of the benefits from prevention of the specified diseases which are the vaccine targets.

RECORD NO. 233793006 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Synthesis of Hospital Organization Research

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-28-79	12-21-79	11,247	11,247	11,247

INVESTIGATOR NAME AND ADDRESS

DOTY, PAMELA
CENTER FOR POLICY RESEARCH, INC.
475 RIVERSIDE DRIVE
NEW YORK CITY
NEW YORK 10027

OBJECTIVE:
The purpose of the research is to provide a synthesis of hospital organization research over the period 1960-1979. A classification system based on sociological theory is used to describe the characteristics of this research. The final product will be an analysis of trends in topics and quality of research, and an information system.

APPROACH:
The classification system employed is an extension of that used in a previously completed survey of hospital organization research in the 1960's by Dr. Basil S. Georgopoulos. Information is supplied on conceptual, substantive and methodological aspects of the research. Data is of two types; analytic and descriptive, with the former data used to study interrelationships among aspects of the research and to study trends in types of research over time, while the latter data provide English-language summaries of methods and findings for each study.

FINDINGS:
No significant findings.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 233793007 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Data Processing Services

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-10-79	09-09-82	329,404	329,404	329,404	GREENLEAF, ROSS W INPUT/OUTPUT COMPUTER SERVICE, INC 400 TOTTEN POND ROAD WALTHAM MASSACHUSETTS 02154

OBJECTIVE:
The National Center for Health Services Research currently has a number of research activities involving the production of unique and valuable data bases. This contract is to provide data processing support for these activities.

APPROACH:
The number and nature of the research activities varies greatly. This requires a wide scope of support activities. Support under this contract is available to all NCHSR professional staff, for the following services: Data Base Maintenance, Analysis File Development, programming. To the extent useful services are provided using Government Data Processing Resources.

FINDINGS:

RECORD NO. 233793009 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Analysis of State Authorities for Regulation of the Quality of Health Care Services

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	03-30-81	228,663	228,663	228,663

INVESTIGATOR NAME AND ADDRESS

MALONEY, SHEILA A
ASPEN SYSTEMS CORPORATION
20010 CENTURY BOULEVARD
GERMANTOWN
MARYLAND 20767

OBJECTIVE:
To compile and analyze State statutes and regulations which govern the quality of health care services within each State; to compare these with related Federal statutes and regulations to reveal significant omissions, duplications and interferences; and to define the organizational structures and resources by means of which each State implements its authorities to assure the quality of health care services delivered to its citizens.

APPROACH:
Due to the absence of a uniform source which specifies for each of the 50 states the pertinent statutes, regulations or organizational units which exercises authority over health care quality, the scope of this project extends to all State and Federal laws and regulations in effect as of October 1979, the self-regulatory mechanisms effected by professional organizations in effect as of the same date, and, through comparative analysis, identification of all gaps and areas of duplication.

FINDINGS:
The final product of this contract will be a bounded compilation of current (through June, 1980) State and Federal laws and regulations, and standards developed by the private-sector professional organizations, which govern the assurance of quality of health care within each of the 50 states. The document is intended for the use of macro- and micro-level health planners, administrators, and providers whose planning and resource decisions are impacted by quality assurance controls. The compilations will include information on licensing and certification of individuals and facilities, and reporting requirements.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 233793010 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Synthesis of Cost of Illness Methodology

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-29-79	08-28-80	144,657	144,657	144,657	HU, TEH-WEI GEORGETOWN UNIVERSITY 37TH AND O STREETS, N.W. WASHINGTON DISTRICT OF COLUMBIA 20057

OBJECTIVE:
To conduct a systematic review and evaluation of the methods, procedures, and data used to estimate the cost of illness (COI), identify the specific areas where the current methodology may be inadequate, and determine the feasibility of overcoming those limitations.

APPROACH:
All major COI studies, including those done as part of health care oriented cost-benefit and cost-effectiveness analyses, will be identified and reviewed and a descriptive and critical analysis of its objectives and the methods, procedures, and data used to satisfy those objectives will be provided. A comparative analysis of sets of studies or analyses similar in intent but involving alternative assumptions, methods, or data will be done, focusing on the impact of those variants on the COI estimates. A summary synthesis of current COI methodology will be provided.

FINDINGS:
It is expected that the results of this study will provide the basis for innovative research designed to provide the more thorough measurement techniques and the more complete data sources necessary to improved understanding of the COI required by P.L. 95-623; the Health Services Research, Health Statistics, and Health Care Technology Act of 1978.

TITLE: Computer-Medicine Laboratory

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-01-70	06-30-80	0	2,315,781	2,315,781

INVESTIGATOR NAME AND ADDRESS

BLEICH, HOWARD L
BETH ISRAEL HOSPITAL
330 BROOKLINE AVE
BOSTON
MASSACHUSETTS 02215

OBJECTIVE:
To develop and test a computerized system for assisting in patient history taking, medical decision-making, patient instruction, medical report generation and information retrieval.

APPROACH:
A number of previously developed programs are integrated and tested in operational trials, including: decision assistance in blood chemistry regulation and diagnosis, information retrieval for a stroke registry, report generation for X-ray readings, ECGs and physical exams, interactive patient interviewing and instruction for medical history taking, genetic and nutritional counseling, management of urinary infections and certain psychosomatic problems. Management of patients assisted by a computer system is compared with a control group using ordinary methods for each element of the areas covered by the computer programs. Patient and physician reactions to the techniques as well as technical outcomes are evaluated.

FINDINGS:
Professionals were studied and modeled in their roles as takers of medical history and providers of care for patients with urinary tract infections, hyperlipidemia, and behavioral problems. Experimental evidence indicates that patient-computer dialogue can serve as the basis for subsequent, effective, and economical treatment. Studies indicate that preliminary interviewing by computer can assist nutritionists in follow-up dialogue with their patients, and that automated dietary counseling can assist patients directly in organizing their thoughts about eating and in planning their own dietary behavior.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02112 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPUTIC INNOVATIONS

TITLE: Studies of Improving Efficacy of Clinical Decisions

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-78	06-30-80	35,811	71,645	71,645	FRYBACK, DENNIS G UNIVERSITY OF WISCONSIN MADISON 500 LINCOLN DR MADISON WISCONSIN 53706

OBJECTIVE:
To address the development of decision protocols to assist physicians in optimizing clinical patient management decisions.

APPROACH:
In the first year of this grant, a number of barriers to the implementation of decision analysis were identified and addressed by preparing a guide to the use of this new technology. Two studies were initiated in the use of decision analysis (evaluating epigastric pain and determining level of leg amputation). In the second year, the grantee will try to apply decision analysis to more general problems such as "to hospitalize or not" and initiate two new studies applying decision analysis to mastectomy and discharge from coronary care units.

FINDINGS:
The expected findings of this project are proof of the feasibility and utility of the analytic approach to medical decision making. It is relevant to cost and quality issues in health care in that it addresses questions of the efficiency and effectiveness of a wide range of health service activities.

TITLE: Evaluation of Breast Cancer Detection Strategies

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
02-01-79	05-31-81	78,398	78,398	146,575

INVESTIGATOR NAME AND ADDRESS

GOHAGAN, JOHN K
WASHINGTON UNIVERSITY
LINDELL AND SKINKER BLVD
SAINT LOUIS
MISSOURI 63130

OBJECTIVE:
To identify cost effective breast cancer detection strategies through retrospective assessment of the experience encountered in screening a large population of women.

APPROACH:
The group will develop risk profiles for 10,000 women in order to determine the value of specific screening modalities as predictors of breast cancer. The sequential pattern of application for each combination of specific detection modalities will also be evaluated. In addition, the group will prepare a detailed implementation manual so that the method for selecting screening strategies can be used in other settings.

FINDINGS:
Preliminary findings, based on limited data, have identified mammography as the most sensitive individual detection modality for asymptomatic women. The true positive rate for mammography was found to be 74%. Furthermore, it appears that multi-modality screening protocols can increase sensitivity to nearly 90%, with a small concomitant decrease in specificity. Thus, on the basis of sensitivity and specificity, two strategies appear to be superior. One strategy calls for recommending a biopsy based independently on clinical examination or a mammographic examination. In the other strategy, biopsy is recommended only upon a complete review of the medical record in the context of suspicious clinical, mammographic, or thermographic results.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03264 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPUTIC INNOVATIONS

TITLE: Evolution of Federal Policy for Chronic Renal Disease

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-78	08-31-80	0	53,886	53,886	RETTIG, RICHARD A RAND CORPORATION 1700 MAIN ST SANTA MONICA CALIFORNIA 90406

OBJECTIVE:
To prepare a case study of the evolution of Federal government policy toward end-stage renal disease as a model useful in analyzing the emergence, development and diffusion of complex medical technologies in political, social and ethical terms.

APPROACH:
During the thirteen years covered by this case study, five discernible periods will be studied: early 1960's (emergence of clinical therapies); 1962 through 1965 (initial policy development); 1966 and 1967 (Bureau of Budget expert committee was convened); 1967 through early 1970's (issues of institutional feasibility and capacity) and 1972 (provision of Medicare financing). The primary foci of the study will be developments within clinical medicine, developments within the policy process, and the cumulative interactions of the medical-scientific community with the policy system. Information for this study will be collected through literature search, internal agency memoranda, and interviews with key actors.

FINDINGS:
It is expected that this case study will document how government policies and programs toward end-stage renal disease evolved and should prove very useful in future "life or death" policy formulation. The product of this effort will be a Rand report suitable for publication by the National Center for Health Services Research.

RECORD NO. HS03314 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPUTIC INNOVATIONS

TITLE: Evaluation of Medical Diagnostic Technology

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-79	06-30-82	356,517	356,517	1,065,753

INVESTIGATOR NAME AND ADDRESS

FINEBERG, HARVEY V
HARVARD UNIVERSITY
677 UE
BOSTON
MASSACHUSETTS 02115

OBJECTIVE:
To examine the efficacy, cost, and cost effectiveness of three classes of diagnostic technology (laboratory tests, imaging, and physiological function testing) to establish analytic models which are broadly applicable to other diagnostic tests and technologies.

APPROACH:
A systematic methodology for assessing the efficacy and economic consequences as well as factors affecting the diffusion process of medical technologies, including multi-channel laboratory analyzers, individual chemistries, white blood cell differential counters, computed tomography, ultrasound, chest x-ray, and long term electrocardiography, will be developed. The evaluation methodology will include three major elements: (1) expanded concepts of efficacy, cost, and cost-effectiveness, (2) development of generalized approach to the measurement of the information content of tests based on receiver operating characteristic principles, and (3) development of a systematic analytic framework for considering impacts of policy interventions.

FINDINGS:
A comprehensive framework, containing elements of technology evaluation and detailed concepts of efficacy assessment and cost-effectiveness analysis, will be developed to address issues relating to the development, dissemination, and use of diagnostic technologies in an environment of limited resources. The results will be relevant for reimbursement policies, design of health planning criteria, and policy discussions.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03625 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPUTIC INNOVATIONS

TITLE: An X-Ray Screening Protocol for Extremity Injuries

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-01-79	09-30-80	55,925	55,925	55,925	BRAND, DONALD A YALE UNIVERSITY NEW HAVEN CONNECTICUT 06520

OBJECTIVE:
To develop and test statistical model for the decision to x-ray in the case of extremity injuries in the emergency facility.

APPROACH:
Patients with upper and lower extremity injuries will be studied prospectively. Data will be gathered on patient characteristics and clinical manifestations, such as "swelling" and "limitation of motion" to identify that variable or combination of variables which best indicates the presence of fracture, as confirmed by x-ray. The resulting model will be used to develop a protocol for use in determining the necessity for x-ray. The protocol will be designed to reduce the number of x-rays without increasing the number of "missed" fractures compared with the status quo and tested in over 1,000 patients. Patients identified by the protocol as low-risk will not be x-rayed, but will be followed up by telephone and re-examined if an undetected fracture is suspected.

FINDINGS:
Reducing the number of unnecessary x-rays would result in a substantial cost savings; the method proposed, if successful, also could be used for x-rays of other types of injuries and would also be adaptable to other diagnostic procedures.

RECORD NO. HS03645 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPUTIC INNOVATIONS

TITLE: Utilization Patterns of Cranial CT

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
08-01-79	01-31-82	79,826	79,826	162,929

INVESTIGATOR NAME AND ADDRESS

MC NEIL, BARBARA J
PETER BENT BRIGHAM HOSPITAL
721 HUNTINGTON AVE
BOSTON
MASSACHUSETTS 02115

OBJECTIVE:
To assess the relationship between diagnostic indications for the yield of abnormal cranial computer tomographs.

APPROACH:
Data to be collected on 15,000 consecutive patients referred for cranial Computed Tomography (CT) to a university hospital and to a community hospital will include indications for CT (history, signs, symptoms, and laboratory results), yield of CT (normal or abnormal findings), demographic items, and a detailed analysis of CT findings as reported by a neuroradiologist. At the seven-, thirteen-, and nineteen-month intervals, assessments of the relationships between indicators and CT yield will be made using both simple sorting and tabulating techniques as well as discriminant analysis. Regression analysis will be used to derive information concerning the ability of various indications for predicting CT yield. These interval assessments will be reported to physicians participating in the study. A statistical comparison of CT utilization patterns before, during, and after the study to determine whether the interval educational assessments have been effective. The feasibility of deriving optimal CT locations based on the geographical location of patients will be explored.

FINDINGS:
It is anticipated that this study will provide information concerning both utilization and location of Computed Tomography units which will have important implications for cost containment efforts and quality of care both in health planning (e.g., certificate-of-need decisions) and the delivery of health care (e.g., unnecessary procedures).

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03665 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPUTIC INNOVATIONS

TITLE: Decision and Policy Analysis for Fetal Monitoring

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-79	12-31-80	28,366	28,366	31,207	COHEN, ALAN B HARVARD UNIVERSITY 677 HUNTINGTON AVENUE BOSTON MASSACHUSETTS 02115

OBJECTIVE:
To develop a model of clinical decision-making regarding fetal monitoring in intrapartum management of obstetrical patients considering such variables as safety, efficacy, and cost; and to analyze public policy options and implementation strategies.

APPROACH:
A decision-making model for fetal monitoring will be developed by applying Bayes' Theorem to the major variables as identified in the medical literature and by expert obstetricians. Cost-effectiveness analysis (rather than cost-benefit analysis) will then be used to assess societal costs of alternative monitoring methods. Sensitivity analysis will be made of the most uncertain elements and assumptions. The practical application of this information will be addressed through the identification of relevant policy options and the development of implementation strategies with special emphasis placed on cost containment. Implications for evaluating other medical technologies will also receive attention.

FINDINGS:
Fetal monitoring practices will be evaluated using decision and cost-effectiveness analyses, and policy options will be identified. The relative effects of the policy interventions upon the costs, diffusion, and the utilization of fetal monitoring will be assessed. These findings could be used to evaluate new technologies before they are introduced into medical practice.

RECORD NO. HS03834 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPUTIC INNOVATIONS

TITLE: A Medical Database Approach to Evaluate Technology

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-82	359,045	359,045	1,136,184	STEAD, E A, JR DUKE UNIVERSITY DURHAM NORTH CAROLINA 27706

OBJECTIVE:
To continue the implementation of a cardiology data bank that provides data on the efficacy and efficiency of costly diagnostic and therapeutic procedures for patients with chronic illness in the area of cardiology.

APPROACH:
This project will build onto the existing ischemic heart disease data bank that presently contains information on over 6,500 patients. The approach couples patient care integrated data acquisition with regular follow-up. Principle modes of analysis will be the multiple logistic regression model, Cox's proportional hazards model, and decision-type methods. Longitudinal data is periodically integrated with previous entry point data making it possible to generate and test hypotheses relating various tests and procedures to patient outcome.

FINDINGS:
This project is expected to document the utility of computerized chronic disease data banks in the management of large numbers of patients with a given illness. It will generate appropriate strategies for the use, frequency, and sequence of those tests and procedures which are of value and establish a basis for evaluating tests which are unnecessary or of marginal value. This has important implications for the acceptance of new medical technology and the continued use and reimbursement for existing procedures.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03879 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPUTIC INNOVATIONS

TITLE: Effects of Computerized Drug Order Review System

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-01-79	08-31-81	97,327	97,327	200,376

INVESTIGATOR NAME AND ADDRESS

SIEGEL, CAROLE E
ROCKLAND RESEARCH INSTITUTE
BLDG 37
ORANGEBURG
NEW YORK 10962

OBJECTIVE:
Reviews open drug orders against a set of established guidelines and which informs clinicians of observed exceptions to them. The assessment is being made in 5 institutions for the mentally retarded. Investigation of factors which affect exception rates and changes in knowledge of pharmacotherapy (such as clinician characteristics, attitudes), and institutional and environmental factors are being undertaken.

APPROACH:
A medication order review system, as a component of a multi-state information system, has been operational for 4 years as a mechanism to flag exceptional cases for peer review and to promote continuing education. The system has 2 modules: a patient drug profile module and rules for questionable prescribing practices which was developed by medical staff serving a state-wide mental health care system. Over the next 2 years the system is to be installed in 50 mental health and retardation facilities in New York State. The present study will examine its effects in 4 state institutions. An assesment of the system for 1 institution has already been published. A notable finding of the assessment was the consistently high rate of exceptions with treatment of long term (3+ years) patients; low dose orders being most frequently recorded. With more frequently prescribed drugs, the exception rate declined over the 3 years experience with systems in one hospital.

FINDINGS:
The computerized medication order review system is now being implemented in the 50 psychiatric and mental retardation inpatient facilities of New York State. In its pilot site, the system appears to have caused a three-fold reduction in exception rates. In order to more carefully examine the direct effects of the system on clinicians' prescribing behaviors, a grant supported, controlled study has been undertaken comparing clinicians in settings with and without the system. During the first year of the project the activities carried out have focused on the establishment of the study population, instrument development, and pre-system assessments in those study facilities in which the computer systems have been installed.

RECORD NO. HS03892 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPUTIC INNOVATIONS

TITLE: Experimental Evaluation of Computerized Drug Profiles

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	12-31-81	55,420	55,420	66,188	TOMPKINS, RICHARD K UNIVERSITY OF WASHINGTON SEATTLE WASHINGTON 98195

OBJECTIVE:
To assess the benefits of computerized drug profiles in terms of improved prescribing practices and savings in provider and patient time, and the costs in terms of system operating expenses and changes in drug expenditure and utilization patterns.

APPROACH:
This randomized controlled trial will make use of a currently available computerized data base and observational data from a sample of provider-patient encounters at the Seattle Public Health Service Hospital. The hospital has an operational Public Health Automated Medical Information System (PHAMIS), a modular computer-based information system used for patient registration, the recording of certain skeletal data about each outpatient-provider encounter, and the outpatient pharmacy system. Baseline data were collected for five months prior to the routine computer generation of a detailed drug profile for an 80% random sample of the clinic population. Identical drug information will be captured for the remaining 20% of patients, but no profiles will be generated. Analysis will include comparisons within and between the control and experimental groups both before and after implementation, and between group comparisons for any changes occurring within each group during the study.

FINDINGS:
Some additional data will be collected and additional analyses will be conducted on this as well as the already collected data during the 02 year. However, preliminary findings suggest that the only significant effect of profiles on provider time is to shorten the amount of time required to write prescriptions (and then, only if the profiles are actually used in the writing of those prescriptions). A Summary of the resultant effects of profile use on the cost of services indicates that $.063 per profile is required for computer and material expenses, and $.047 per profile for file clerk wages. No statistically significant differences were found in the quantity or costs of drugs prescribed.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02485 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Controlled Trial of a Quality Assurance Mechanism

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
03-01-77	02-28-81	261,423	604,598	636,643	MC DONALD, CLEMENT J INDIANA UNIV-PURDUE UNIV AT INDIANAPOLIS 355 N LANSING INDIANAPOLIS INDIANA 46202

OBJECTIVE:
To continue development and evaluation of an outpatient computer system designed to improve the process and outcome of medical care through the use of treatment protocols.

APPROACH:
Grantee will develop a series of simple, computer-based, medication-related protocols to test physician compliance to protocol and the impact of compliance on patient outcome.

FINDINGS:
Protocols will be evaluated by three methods--cost, process, and outcome--in order to demonstrate a cost-effective mechanism for insuring care quality and to provide a better understanding of the presently ill-defined interrelationships between process and outcome of medical care.

RECORD NO. HS02649 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Automated Record Summaries: Analysis of an Experiment

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-01-77	08-31-80	14,109	83,298	83,298

INVESTIGATOR NAME AND ADDRESS

ROGERS, JAMES L
NORTHWESTERN UNIVERSITY
303 E CHICAGO AVE
CHICAGO
ILLINOIS 60611

OBJECTIVE:
To determine what effect, if any, the use of a computerized medical record summary has on the outcome of patient care.

APPROACH:
Patient outcomes for six diseases will be traced over time and compared for two randomly assigned groups: one for which the computerized medical summary was used and the other where it was not.

FINDINGS:
If patients for whom such a system is available receive better care and enjoy better outcomes, further diffusion of this technology should be encouraged.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS02777 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Evaluation of a Hospital Data Management System

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-78	09-30-80	45,715	114,059	122,761	BRIAN, EARL W UNIVERSITY OF SOUTHERN CALIFORNIA LOS ANGELES CALIFORNIA 90007

OBJECTIVE:
To assess the utility of small, one-way order entry automated hospital information systems (AHIS) for use in small to medium size hospitals.

APPROACH:
Two specific areas will be emphasized in this study: Hospital cost implications and technological limitations of these systems. Using vendor supplied information, corroborated through visits to hospitals with operational systems, the project staff will prepare a general description of the capabilities of this class of hospital system. On a task by task basis, cost savings (or losses) will be projected for system use as compared to traditional manual methods. The software and hardware of commercially available systems will be evaluated to identify limitations for future system growth, such as how feasible it would be to add functions that make the system more comprehensive.

FINDINGS:
This study will produce an objective statement concerning the utility and technological limits of currently commercially available small AHIS. In view of the increasing interest by small and medium size hospitals to acquire such systems, this information should prove very useful to the hospitals and HSAs. It should also provide badly needed background information from which rational policies can be formulated encouraging or discouraging the use of this technology.

RECORD NO. HS03000 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Computer Intervention in Clinical Drug Therapy

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-01-78	08-31-81	379,561	695,561	695,561

INVESTIGATOR NAME AND ADDRESS

COHEN, STANLEY N
STANFORD UNIVERSITY

STANFORD
CALIFORNIA 94305

OBJECTIVE:
To develop, implement, and evaluate a computer based system, called MINERVA (Monitoring and Intervention in Therapeutic Actions), for automatically guiding the selection, dosage, and route of the administration of therapeutic drugs for hospitalized patients.

APPROACH:
The "ideal" drug management logic will be developed by means of a synthesis of current literature, laboratory efficacy results and expert recommendation. MINERVA will contain the logic and a computer-stored knowledge base concerning possible adverse drug reactions, inappropriate therapeutic situations, possible drug effects on laboratory test results and toxicity monitoring. Patterns of diagnosis, treatment, drug and laboratory data for individual patients which conflict with the knowledge base will cause advisory messages to be transmitted to the responsible physician. A randomized controlled experiment reinforced with before-after and time series elements is planned to evaluate the impact of the MINERVA system on the frequency of inappropriate drug actions, frequency and nature of physician acceptance. This project will rely on components of the operational mediphor (monitoring and evaluation of drug interactions by a pharmacy-oriented reporting) system and will interface with the operational LABSYS (Clinical Laboratory Information System).

FINDINGS:
This study is expected to identify the extent of inappropriate drug therapy as it relates to clinical laboratory testing, specific clinical circumstances and prior adverse reactions. It is expected that the MINERVA system will serve as a prototype for the development of other technology which utilizes pre-existing laboratory and pharmacy modules of medical information systems for purposes of prevention, peer review, and quality assurance.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03347 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: HSA Medical Information System Evaluation Guidebook

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-78	06-30-80	0	29,860	29,860	HODGE, MELVILLE H INDIVIDUAL AWARD--HODGE, MELVILLE H. 21238 SARAHILLS DR SARATOGA CALIFORNIA 95070

OBJECTIVE:
To create a guidebook for use by staff members of Health Systems Agencies (HSAs) and State Health Planning and Development Agencies (SHPDA) in evaluating proposals from hospitals for acquisition of medical information systems.

APPROACH:
Key issues and problems concerning hospital information systems will be identified by interviewing health planners and investigating statutory and regulatory requirements. A review of relevant research literature and current systems installations will be conducted. The issue and research information will be combined in a document with a guidebook format that will be directly useful to the health planner in reviewing proposals for installations of medical information systems in hospitals.

FINDINGS:
The results of this project will provide a tool for use by health planners in establishing a review process for hospital decisions relating to medical information systems.

RECORD NO. HS03573 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Clinical Computer Audit: Effects on Cost and Resource

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
02-01-79	07-31-81	21,038	21,038	54,883

INVESTIGATOR NAME AND ADDRESS

THOMAS, JAMES C
UNIVERSITY OF TEXAS HLTH SCI CTR HOUSTON
BOX 20036
HOUSTON
TEXAS 77025

OBJECTIVE:
To evaluate the effect of an automated medical record chart review system (AMRCRS) with regard to specific cost items in the care of ambulatory patients with chronic diseases.

APPROACH:
This study is designed to evaluate the effectiveness of the AMRCRS in the management of ambulatory care patients with chronic diseases; identify compliance problems and assess the adaptability of the AMRCRS for teaching quality assurance and awareness. Eligible patients are identified among established patients of the Diabetes Clinic according to criteria designed to ascertain true diabetic status and reduce the dropout rate experienced in earlier studies at the clinic. New patients follow the same criteria. Patients are randomly divided into two study groups as they are admitted. In Group I, the charts of patients have printouts of recommendations generated by the automated chart review program while they are withheld from the charts of the patients in Group II.

FINDINGS:
It is expected that the automated chart review program in this Diabetes Clinic will improve the process of care and, consequently, outcomes. Ultimately, the AMRCRS may demonstrate cost effectiveness over the traditional medical record through its anticipated streamlining effect on the use of medical care resources through improved organization of information.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03588 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Experimental Dissemination of an Information System

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-79	08-31-80	353,555	353,555	353,555	BARNETT, G OCTO MASSACHUSETTS GENERAL HOSPITAL FRUIT ST BOSTON MASSACHUSETTS 02114

OBJECTIVE:
To develop and refine specifications for the Computer-Stored Ambulatory Medical Record System (COSTAR V), initially developed at the Massachusetts General Hospital, so as to make it more acceptable to ambulatory care providers.

APPROACH:
Current COSTAR V users will provide feedback on implementation problems, operational constraints, and systems performance characteristics for the purpose of making software refinements and developing user educational materials. Priority will be placed on developing capabilities for medical record archiving, extended dictation of provider notes, extended use of quality assurance protocols, and system software features that facilitate implementation at the health care provider site.

FINDINGS:
The automation of medical records and management information has been variously described as reducing cost, improving the health care process, and facilitating the efficient utilization of resources. The non-exportability of existing automated systems has limited the extent to which these issues can be studied outside the influence of the developing laboratory. The current study will provide needed information concerning future dissemination strategies, along with a basic set of user-tried technical and performance documentation.

TITLE: Integrating Medical Knowledge and Clinical Data Banks

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
05-01-79	04-30-81	26,240	26,240	49,666	WIEDERHOLD, GIO C STANFORD UNIVERSITY STANFORD CALIFORNIA 94305

OBJECTIVE:
To develop a computerized medical information system which is capable of accurately extracting medical knowledge on the treatment and evolution of chronic diseases from a data bank consisting of a collection of stored patient records and to facilitate the use of that knowledge by medical researchers and by clinicians in managing individual patients.

APPROACH:
The grant will develop a knowledge base data bank pilot system, called RX, that will be based on the American Rheumatism Association Medical Information System (ARAMIS). The project is predicated on the assumption that the initial problems of data acquisition storage and retrieval have been dealt with, and what remains is the complex task of accurately inferring medical knowledge from a collection of observations in patient records. This project will utilize data processing techniques from the field of artificial intelligence to interpret the observations of symptoms, therapy, and outcome in the data bank.

FINDINGS:
Computerized clinical data banks have enormous potential as tools for assessing the efficacy of new diagnostic and therapeutic modalities, for monitoring the quality of health care delivery, and for support of basic medical research. This grant will utilize techniques of symbolic computation from the field of artificial intelligence to address problems relating to complex time relationships, ill-specified definitions of disease states, complex therapeutic regimens, missing data, and strong potential selectional biases. The proposed research is expected to contribute to the development of improved methodologies for automated storage of medical knowledge and specifically to expand the reliability and utility of clinical data banks.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03672 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Health Information System Transferability Evaluation

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-01-79	11-30-80	26,468	26,468	26,468

INVESTIGATOR NAME AND ADDRESS

DITTMANN, JAY T
UNIVERSITY OF MISSOURI COLUMBIA

COLUMBIA
MISSOURI 65201

OBJECTIVE:
To develop a model based on quantitative assessments of technical and organizational factors which will predict the success/failure of transferring a hospital information system computer component from one operationally successful site to another.

APPROACH:
Operational computerized information systems which have been shown to be cost-effective in their own environment will be identified by means of a scoring system approach. A set of transferability factors obtained through a literature search will be refined by surveying health system users and vendors. These factors will then be weighted by an expert panel of health practitioners and developed into a Transferability Measurement Model (TMM). Preparation of an interactive automated program will be undertaken to facilitate use of the TMM by medical decision makers in selecting computer system components.

FINDINGS:
The problem addressed in this project is significant for implementing effective health care information computer system transfers at reasonable costs and for application in other health systems transfer situations.

RECORD NO. HS03735 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: A Transfer Mechanism for Medical Information Systems

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-15-79	09-14-81	19,548	19,548	19,548

INVESTIGATOR NAME AND ADDRESS

PITELKA, KAREN J
INDIVIDUAL AWARD--PITELKA, KAREN J.
U OF MD, DEPT OF INFO SYS MNGM
COLLEGE PARK
MARYLAND 20742

OBJECTIVE:
To develop a theory for a mechanism of change which will provide for the transferability of health care systems from successful users to potential users.

APPROACH:
Transferring a medical information system from one health care environment to another is essentially creating a new version of the existing system. However, there must be defined a new version of the original system which will coincide with the new host. The definition of the "version progression" is what this project proposes to accomplish. This plan is based on the development of mappings between the different system development phases. Several iterations of such mappings will evolve into a superior description of the medical information system. The theory development will be facilitated by the use of requirements statement language and language development software.

FINDINGS:
The field of medical information systems has reached the point where systems that have been developed are now being marketed. If the principal investigator successfully develops a methodology for effectively transferring medical information systems technology, it would be of wide and practical interest to many institutions, industrial concerns, and planning agencies in need of improving their ability to transfer ideas and systems.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. HS03792 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: A Medical Information Systems Design Methodology

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-84	385,999	385,999	2,435,812	COX, JEROME R, JR WASHINGTON UNIVERSITY LINDELL AND SKINKER BLVD SAINT LOUIS MISSOURI 63130

OBJECTIVE:
To develop a methodology for the design of medical information systems capable of rapid incorporation/deletion of functions in response to user needs.

APPROACH:
Using five experimental data bases, incorporate the methods, techniques, and devices of data base models and systems, data base consistency, very large scale integration, software engineering, modular processors/modular interconnection, and system performance modeling and estimation in the design and testing of a medical information system.

FINDINGS:
Expected results of the proposed research include a variety of findings, dealing for the most part with cost-effective hardware and software techniques for defining, implementing, using, and modifying medical information systems. The practical outcomes of applying these findings will be (1) a reduction in the cost of building and testing new medical automation concepts and (2) an ease in replicating, outside of the primary development sites, those concepts that prove to be efficacious.

RECORD NO. HS03802 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Assessment of Technology in Chronic Disease

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	09-29-82	192,938	192,938	662,629

INVESTIGATOR NAME AND ADDRESS

FRIES, JAMES F
STANFORD UNIVERSITY

STANFORD
CALIFORNIA 94305

OBJECTIVE:
To establish the marginal benefit of specific technologies; analyze the efficacy of drugs and procedures in the community; develop techniques for drug surveillance; determine factors and interventions most strongly associated with patient outcome; determine test/procedure replicability and to establish optimal intervals for repeat testing; and compare alternate modes of data capture and to evaluate data quickly and quality control mechanisms.

APPROACH:
This project builds upon an operational, nationally available arthritis data bank actively investigating problems in rheumatic disease in order to systematically approach the general problems of assessment of distributed medical technology. The American Rheumatism Association Medical Information System (ARAMIS) currently tracks 10,000 arthritis patients, has information on 50,000 encounters, and 20 years of patient follow-up. The system is composed of ten separate data banks including university centers, population-based samples, surgical- and private-practice patients, multiple institutions, and pediatric patients. The data banks are supported by TOD (Time Oriented Databank), a computer data management system. Through its unique storage and retrieval capabilities data becomes readily available for individual study, for detecting correlations and interactions between variables, for comparison of therapeutic interventions with changes in clinical course, for life-table outcome analysis for charting distribution of values within a given patient population, and for a host of additional and potential search programs.

FINDINGS:
This project serves as a model for the use of the chronic disease data bank in technology assessment, in analysis of marginal benefit, in surveillance for problems from the use of technologies in the community, and for the determination of the external validity of traditional information sources. The following six major research activities will be undertaken: (1) Development of a data bank capability for systematic analysis of marginal benefit. Utilizing a stepwise logistic regression program (Most Valuable Variable), this study will identify the marginal information derived from a specific test or treatment; (2) Investigation of the marginal benefit of specific procedures; (3) Analysis of arthritis drug efficacy in the community; (4) Survey of long-term medication patterns in the community. The purpose here is to monitor the effectiveness and side effects of specific drugs administered for long periods of time; (5) Development of a capability for systematic response to the unexpected side effect, the single ominous case report; (6) Analysis of factors predicting surgical outcome for arthritis. The purpose here is to assess the outcome of total hip replacement as a prototype of operations for the management of severe arthritis.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 230760300 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Demonstration and Evaluation of the Use of Computerized Databank in Treating Coronary Artery Disease

PROJECT DATES START	END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-76	11-15-80	0	2,776,344	2,776,344	ROSATI, ROBERT DUKE UNIVERSITY DURHAM NORTH CAROLINA 27710

OBJECTIVE:
To evaluate and continue to develop a clinical data bank for coronary artery disease and to test its transferability to another institution.

APPROACH:
The current databank will be extended and modified for operation in ambulatory settings. The evaluation will test the effect of the databank on the efficacy of treatment, patient outcomes, costs, and provider productivity. The system will be instituted in another institution in order to evaluate the feasibility of extending it to other hospitals and of pooling from multiple sources information based on common definitions and procedures.

FINDINGS:
By aggregating, analyzing, and making the clinical experiences of a large number and variety of patients available to the individual physician, chronic disease data banks have the potential to improve the individualization of therapies and the accuracy of prognoses.

RECORD NO. 233783008 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Demonstration of COSTAR V

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
04-17-78	10-15-80	26,012	417,869	417,869

INVESTIGATOR NAME AND ADDRESS

PIASECKI, PHILIP
MEDICAL HEALTH GROUP
1012 OLD NORTH POINT ROAD
BALTIMORE
MARYLAND 21224

OBJECTIVE:
To demonstrate and evaluate the utility and acceptance of the COSTAR (Computer Stored Ambulatory Record) system developed under an earlier NCHSR grant by implementing the system in a multi-specialty, primary-care oriented health care delivery setting.

APPROACH:
Components of COSTAR to be tested include the systems for patient identification, registration, accounts receivable, medical records, and generating reports that are applicable to peer and utilization review and quality assurance. Design features aimed at enhancing COSTAR's exportability to other settings will also be evaluated.

FINDINGS:
Computerized information systems offer the means to eliminate voluminous files of paper records which by their sheer bulk and inherent lack of organization may hinder the practice of good medicine. The computer not only provides a mechanism for maintaining uniform, accurate, and comprehensive data relative to the clinical situation of the patient and the treatment regimen, it can also be used to monitor automatically the process of care. Computer based systems can also make available large, accurate data bases which may provide cost-effective opportunities to analyze the effectiveness and efficiency of various treatment processes.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 233783011 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Exportation, Expansion and Dissemination of the PROMIS System

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-27-78	09-03-81	695,883	1,852,307	2,772,307	MILLER, DAVID A UNIVERSITY OF VERMONT 340 WATERMAN BUILDING BURLINGTON VERMONT 05401

OBJECTIVE:
The implementation of the Problem Oriented Medical Information System (PROMIS) at the Baltimore Cancer Research Center. The System was developed at the University of Vermont with NCHSR support, and now with the National Cancer Institute (NCI) will represent the first exportation of PROMIS.

APPROACH:
The PROMIS system will be expanded to include administrative functions at the Baltimore Cancer Research Center and to extend the data base critical for continued monitoring and upgrading of medical practice.

FINDINGS:
PROMIS has been designed to solve the problem of coordinating, retrieving, organizing, and monitoring information about patients and the services they are receiving. Traditional paper records are replaced with a computerized record that medical professionals retrieve and update directly as they provide services. All data are collated according to the medical problems to which they relate. Hence, each provider is aware of the reason for a service and of its relationship to the total care regimen.

RECORD NO. 23379300002 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Methods for Estimating Cost Impact of Computerized Health Care Technology

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-19-79	03-17-80	86,513	86,513	86,513

INVESTIGATOR NAME AND ADDRESS

DRAZEN, ERICA
LITTLE, ARTHUR D., INC
ACORN PARK
CAMBRIDGE
MASSACHUSETTS 02140

OBJECTIVE:
To critique methodologies for assessing cost impacts of automated hospital information systems.

APPROACH:
Research done in this area in the past has been assembled and revised. Approaches in these studies to the identification, prediction or measurement, and analytical treatment of specific cost impacts are compared and then adequacy and validity assessed.

FINDINGS:
Conclusions are drawn about the current state of the art of assessing AHIS Cost Impacts. Recommendations are made concerning the best available technique. Further research is recommended in the improvement of specific cost assessment methods and in the development of better information on the influence of automated information handling on hospital costs.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 233793021 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Technical Assistance and the Dissemination of a Computer Stored Ambulatory Medical Records System (COSTAR V)

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-81	527,890	527,890	566,856	KERLIN, BARBARA MITRE CORPORATION 1820 DOLLY MADISON BOULEVARD MCLEAN VIRGINIA 22102

OBJECTIVE:
This Contract is intended to provide technical assistance to commercial vendors who are engaged in providing COSTAR V services to health delivery sites. Additionally, the contractor, The MITRE Corporation will maintain the COSTAR V System and update it periodically with enhancements developed by the various users and developers of COSTAR V.

APPROACH:
The Contract calls for: 1. The maintenance of the COSTAR V system with new updated release made available every 8 months. 2. Technical assistance in COSTAR V installation techniques will be available for up to 2 man/months to commercial users that can demonstrate that they can provide COSTAR V services to multiple health delivery sites. 3. A clearinghouse of commercial vendors and users of COSTAR V will be developed.

FINDINGS:
Even in its early stages (3 months) this contract has attracted National and International interest. Letters requesting technical assistance in COSTAR V installation techniques have been received from more than a dozen commercial vendors. Two day training sessions starting Jan. 11-12, 1980 will be held each month. Plans indicate that a new release of COSTAR V will be made available approximately March 1, 1980.

TITLE: Efficient Resource Allocation in Special Care Networks

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
08-01-78	07-31-80	0	31,583	31,583

INVESTIGATOR NAME AND ADDRESS

WONG, RUBY M
STANFORD UNIVERSITY

STANFORD
CALIFORNIA 94305

OBJECTIVE:
To design, demonstrate, and evaluate assignment and dispatch procedures (i.e., an allocation system) for use by referral centers of special care networks in sending patients to appropriate care delivery sites by appropriate transportation.

APPROACH:
The assignment and dispatch procedures will incorporate medical, economic and administrative considerations. They will be based on current capacities of care sites (by type of service), number of care requests awaiting assignment (by type of service, by referring and receiving hospitals), and category of transportation vehicle (including information on route, weather conditions and traffic conditions). The procedures will be tested by means of a computer simulation model based on historical data from the Northern California Infancy Medical Dispatch Center (NCIMDC). Static objectives (e.g., minimize response time) and dynamic objectives (e.g., early warning when the special care network or an individual site is near saturation) will be investigated. The procedures will be demonstrated and evaluated through a practical application at NCIMDC using both manual and computerized means.

FINDINGS:
It is expected that the system will produce improvements in the day-to-day utilization of available special care capabilities as well as provide input for long range planning for regional special care networks. Measurable cost savings are also expected. Rural populations may especially benefit from improved efficiency in the utilization of high cost special care.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1979

RECORD NO. 230770112 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - SERVICE DELIVERY SYSTEMS

TITLE: Demonstration of Computerized Decision Support System in a Nurse Practitioner-Staffed Rural Clinic

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-29-77	04-30-81	0	310,335	310,335	DAVIS, ELIZABETH VISITING NURSE ASSOCIATION, INC. 260 COLLEGE STREET BURLINGTON VERMONT 05401

OBJECTIVE:
To demonstrate the feasibility of a remote computerized record system in a nurse practitioner staffed rural health clinic and the impact of such a system on health and medical care delivery.

APPROACH:
The feasibility of a link between the computerized Problem Oriented Medical Record System (PROMIS) at the University of Vermont in Burlington and a rural health clinic in Grand Isle, in Lake Champlain, would be explored. If such a link were feasible, adaptations of guidance frames for delivery of care from the in-patient to the ambulatory setting would follow. Before and after data would be collected on the practice setting.

FINDINGS:
The installation of the link was accomplished. A microwave system was installed because a direct signal path to the University of Vermont was possible and the response rate between the terminals at Grand Isle and the computers at the University of Vermont was much faster by microwave than by telephone. Initial data were collected on the practice setting using the manual PROMIS. However, due to staff turnovers in the interim, the before-after impact has been changed to a case study approach. The expected results will encompass the incorporation of such a system into a rural health clinic and the development of guidance frames for ambulatory care delivery.

TITLE: Automated Hospital Information Systems Workbook

PROJECT START	DATES END	FY 79 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	03-31-81	245,658	245,658	245,658

INVESTIGATOR NAME AND ADDRESS

BRIAN, EARL W
UNIVERSITY OF SOUTHERN CALIFORNIA
UNIVERSITY PARK
LOS ANGELES
CALIFORNIA 90007

OBJECTIVE:
To develop a loose-leaf, updatable Automated Hospital Information System (AHIS) Workbook to assist hospital decision-makers with processes related to AHIS, including familiarization; determination of need; assessment of benefits; projection of costs and savings; selection of optimum system and approach; and system acquisition, implementation, and technical/organizational management.

APPROACH:
The Workbook will be divided into five sections. Section I is an introduction which will explain the purpose of the document, describe its use, provide definitions for AHIS applications, and describe the AHIS Classification Scheme used in the Workbook. Section II involves hospital decision making including the gathering and evaluation of decision-making information; the identification, involvement, and direction of key hospital personnel in the decision-making process; the provisions of guidelines for acquiring special expertise in systems and computers, and the consideration of valid alternatives to AHIS prior to hospital commitment. Section III will provide the hospital with methods for projecting the costs and savings attendant with the implementation of an AHIS, including a discussion on the advantages and make-up of an effective benefits realization program. Section IV will provide guidance on the selection, acquisition, and operational management of an AHIS. In addition, an Appendix will be developed which will describe in standard terminology the functional capabilities of the currently available commercial systems.

FINDINGS:
It is expected that the AHIS Workbook will provide much needed guidance on the steps which should be taken in the selection, acquisition, implementation, and operation of an AHIS, including an outline for rational decision-making along the way. Upon release, it is also expected that a suitable organization will take responsibility for periodically up-dating the Workbook and using it as a foundation for establishing an AHIS hospital user educational service, including, workshops, seminars, and institutes. The results of these activities should be a significant improvement in the quality of hospital planning and decision-making relative to the complex and costly technology, and ultimately contribute to the goal of improving the efficiency and effectiveness of hospital care.

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RESEARCH MANAGEMENT SERIES

Summary of Grants and Contracts Active on September 30, 1980

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
National Center for Health Services Research

National Center for Health Services Research
Research Management Series

The *Research Management Series* describes programmatic rather than technical aspects of the NCHSR research effort. Information is presented on the NCHSR goals, research objectives, and priorities; in addition, this series contains administrative information on funding, lists of grants and contracts, and special programs. Publications in this series are intended to bring basic information on the NCHSR and its programs to research planners, administrators, and others who are involved with the allocation of research resources.

National Center for Health Services Research

Donald E. Goldstone, M.D., (Acting)

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NCHSR

RESEARCH MANAGEMENT SERIES

Summary of Grants and Contracts Active on September 30, 1980

February 1983

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
National Center for Health Services Research

DHHS Publication No. (PHS) 83-3329

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FOREWORD

The National Center for Health Services Research (NCHSR) is the principal source of support for general research to improve the delivery of health services in this country. Its mission is to undertake and support research, demonstrations, and evaluation on problems in the organization, delivery, and financing of health care services; to serve as the focal point for coordination of health services research within the Public Health Service, Department of Health and Human Services; and to disseminate the findings of health services research to policy and decisionmakers in the public and private sectors.

The NCHSR is not the only source of support for health services research at the Federal level. Other government agencies, most notably the Health Care Financing Administration within the Department of Health and Human Services, and the Veterans Administration, also support health services research in conjunction with the programs they administer. However, research priorities in such situations are usually defined and constrained by the immediate information needs of the operating program. The NCHSR, by contrast, has a more general responsibility in developing knowledge. It is responsible for testing the assumptions on which current policies and practices are based, for developing the means for monitoring the performance of the health care system, and for identifying and evaluating alternative approaches to delivering health services and new options for health policy.

Extramural research is supported by NCHSR through a grants and contracts program. Any academic institution, agencies of State or local government, nonprofit organization, or individual is eligible to submit a grant application to NCHSR. This is done by submitting Form PHS-398, Grant Application, to the Division of Research Grants, National Institutes of Health, Bethesda, Maryland 20205 by March 1, July 1, or November 1 of each year. Applications are reviewed by scientific review groups approximately 3 months later.

The NCHSR is required by legislative statute to have each application or contract proposal submitted for a health services research, evaluation, or demonstration project in an amount exceeding $50,000 in direct costs reviewed for scientific merit by a panel of non-Federal experts. While the statute has left the matter of reviewing applications less than $50,000 in direct costs to the discretion of NCHSR, these applications are submitted to peer review as well. The decision to use peer review for all potential research projects is based on the conclusion that such reviews are a prerequisite to assuring the responsible allocation of Federal research dollars. No matter how compelling a research idea, or how critical the social problem to be investigated, without good science the provision of funds to support a proposed project would have little benefit.

The two scientific peer review groups of NCHSR are the Health Services Research and Developmental Grants Review Committee and the Health Care Technology Study Section. These groups meet three times a year to evaluate grant applications. The critique of the proposed project, and the recommendations of the panel, are submitted as a report to the Director, NCHSR, and are also sent to the applicant. This report (Summary Statement) contains a factual summary of the proposed project, a critique of the scientific and technical merit, and a description of the panel's assessment of the importance of the problem(s) addressed and the

potential impact of the proposed project. Scientific review groups may recommend approval, disapproval, or deferral of a decision for the purpose of obtaining additional information. Only applications which meet the test of scientific merit are considered for funding by NCHSR.

The review of all grants for technical merit is an ongoing process. It is NCHSR's policy to reassess every grant annually. After the second year of funding, the continuation reviews for grants are carried out by members of the scientific review group which initially reviewed and approved the grant proposal.

As legislatively mandated, non-Federal experts are also used to review contract proposals. These experts provide technical advice to NCHSR's research staff in the initial development of the contract requirements and in the later review and assessment of contractor performance and products. As in the case with research grants, only contract proposals which meet the test of scientific merit are considered for funding by NCHSR.

The NCHSR research program is designed to provide needed information to government, the health industry, and consumers of health services. The NCHSR relies heavily on an ongoing relationship with policymakers and program administrators at the Federal, State, and local levels, with health care providers, and with consumers to determine what research questions need to be addressed. The NCHSR is responsible as well for seeing that the findings from research projects are made available to these groups in a timely and effective manner.

In its effort to keep the users of health services and the research community informed of research activities supported by NCHSR, a Summary of Grants and Contracts is published on a fiscal year basis. This Summary contains an abstract of each grant or contract supported by NCHSR and active at the end of the fiscal year. The abstracts are arrayed using the NCHSR classification system which is based on the primary issue a research project is designed to address. Grants are identified by an HS preceding the record number (i.e., HS 02345). Contracts are identified by a nine-digit record number (i.e., 233801234). Indexes of the projects by grantee/contractor institution, principal investigator/project director, State, and project number are included.

Anyone wishing further information about the research findings of any grant or contract listed in this publication or information concerning the substantive areas of the NCHSR research program may contact Norman W. Weissman, Ph.D., Director, Division of Extramural Research, Stop 3-18 #2, Park Building, 5600 Fishers Lane, Rockville, Maryland 20857.

The material for this publication was compiled using the Computerized Compendium (COCO), a computer system designed at NCHSR to permit automatic storage and retrieval of information on the NCHSR grant and contract programs. This publication was prepared by Nancy A. Hedges and Karyn D. Wions.

Donald Goldstone, M.D.
Acting Director

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH

CATEGORY	GRANTS		CONTRACTS		TOTAL GRANTS AND CONTRACTS	
	NUMBER	FY 80 $ AWARDED	NUMBER	FY 80 $ AWARDED	NUMBER	FY 80 $ AWARDED
HEALTH CARE COSTS AND EXPENDITURES	22	1,442,646	2	102,212	24	1,544,858
DISSEMINATION	--	- 0 -	7	661,607	7	661,607
EMERGENCY MEDICAL SERVICES AND AMBULATORY CARE	29	3,420,508	--	- 0 -	29	3,420,508
HEALTH CARE AND THE DISADVANTAGED	11	452,435	--	- 0 -	11	452,435
HEALTH INSURANCE	4	270,750	7	1,644,457	11	1,915,207
HEALTH MANPOWER	16	1,003,706	--	- 0 -	16	1,003,706
HEALTH SERVICES RESEARCH CENTERS	6	2,220,330	--	- 0 -	6	2,220,330
LONG TERM CARE	8	1,299,891	2	98,041	10	1,397,932
PLANNING AND REGULATION	6	349,866	2	109,132	8	458,998
QUALITY OF CARE	19	1,868,372	2	1,000,000	21	2,868,372
SPECIAL STUDIES	6	289,943	4	14,950	10	304,893
TECHNOLOGY AND COMPUTER SCIENCE APPLICATIONS	23	2,342,922	6	958,966	29	3,301,888
TOTALS	150	14,961,369	32	4,589,365	182	19,550,734

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS02994 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - HOSPITAL STUDIES

TITLE: Maximum Average Occupancy for Hospital Units

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
05-01-78	10-30-80	0	142,789	142,789	HANCOCK, WALTON M UNIVERSITY OF MICHIGAN 1420 WASHINGTON HEIGHTS ANN ARBOR MICHIGAN 48109

OBJECTIVE:
To develop a methodology for determining the maximum average occupancy that could be achieved on a nursing unit of a hospital.

APPROACH:
Estimation of MAO will be done for hospital units of varying size using a modification of an existing simulation model. The model will take into account five characteristics of the unit including the number of beds, the proportion of admissions which are emergent, the proportion of scheduled admissions that are elective, the mean length of stay, and the variance of length of stay. Derivatives of the methodology include a technique for ascertaining optimum bed size given various levels of the five factors and estimates of the relative contributions of the five factors in determining MAO.

FINDINGS:
The output of this experiment consisted of two parts. One, an equation, determined by regression, which predicted maximum average occupancy according to specified levels of experimental factors and their interactions. The other, a series of graphs relating maximum average occupancy as the dependent variable to each experimental factor as an independent variable. The PI reports his conclusions to show that occupancies can usually be much higher than presently used planning figures would indicate, and that local conditions as reflected in the different values of the input parameters result in different maximum average occupancies.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS03410 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - HOSPITAL STUDIES

TITLE: A Goal Programming Model for Nursing Service Budgeting

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	09-30-81	18,345	52,821	52,821

INVESTIGATOR NAME AND ADDRESS

TRIVEDI, VANDANKUMAR M
UNIVERSITY OF WASHINGTON

SEATTLE
WASHINGTON 98195

OBJECTIVE:
To develop an analytical model for planning budgets in hospital nursing departments and test the model with empirical data so that it could be implemented for planning purposes. A mixed-integer goal planning model has been developed and tested on hypotheticcal data. This project will further refine and test the model with actual data.

APPROACH:
The model is formulated to maximize or minimize some goals (e.g., maximize the surplus in budget or the number of full time nurses; minimize deficit, understaffing or the number of part time nurses, etc.), subject to some specific constraints such as budget, staffing substitution, seniority, hospital policy and coverage, etc. The model will also take into account patient mix and the quality of nursing care. The data regarding these factors for testing the model will be collected from Providence Hospital and Virginia Mason Hospital in Seattle area of Washington State. Questionnaire data for evaluating the cost and benefit of implementing the model will also be collected.

FINDINGS:
There are significant differences in nursing activities among different medical care units of a hospital. A significant amount of substitution and task delegation among different skill levels of nurses for these activities is feasible without adverse impact on quality of care, and are influenced by the actual nursing staff available. A practical computer model will be refined and implemented to increase general interest for nursing services budgeting. This model considers possible trade-offs among full-time, part-time and overtime nurses on weekdays and weekends, various nursing services imposed by nursing unions, and the hospital's budget constraints, goals, and policies.

RECORD NO. HS03674 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - HOSPITAL STUDIES

TITLE: A Study of Investment Behavior in Community Hospitals

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-79	06-30-81	12,056	29,981	29,981	FARLEY, DEAN E PRINCETON UNIVERSITY PRINCETON NEW JERSEY 08540

OBJECTIVE:
To investigate the determinants of investment behavior in U.S. community hospitals. The decision by hospitals to acquire new capital equipment and facilities and related interhospital competition for capital formation will be examined.

APPROACH:
The decision by hospitals to acquire new capital equipment and facilities will be examined at the theoretical and empirical levels. Time element, e.g., lagged adjustment in investment and expected capital gains, will be considered. In general, the research will take into account the following dimensions: (a) inter-hospital non-price competition; (b) institutional objectives; and (c) dynamic rather than static specification.
Hospital data of Pennsylvania (CHSS Hospital Survey, Medicare Cost Reports and the AG-12 reports filed by the hospitals with the state Comptrollers's office) will be utilized. Additional data from one more state, possibly New Jersey or South Carolina, may also be used for analysis.

FINDINGS:
This study will offer better understanding of hospital behavior in capital expenditure and investment, which will then be helpful for health planners and administrators, especially regarding cost containment and regulation.

RECORD NO. HS03695 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - HOSPITAL STUDIES

TITLE: An Economic History of the Community Hospital Sector

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	03-31-81	0	25,353	25,353

INVESTIGATOR NAME AND ADDRESS

KINGSDALE, JON M
UNIVERSITY OF MICHIGAN

ANN ARBOR
MICHIGAN 48109

OBJECTIVE:
To describe the origins and early development of the modern American hospital sector, with particular reference to Baltimore prior to World War II.

APPROACH:
The historical developments of traditional charity and modern voluntary hospitals were explored by analyzing the growth of hospitals between 1873 and 1928; the transition of Baltimore's voluntary hospital from charities to competitive service corporations; the contemporary three-tier structure of Baltimore's hospital sector--university, community, and public hospitals; and the development of hospital prepayment during the Depression. Data sources were: standard medical histories and medical directories for the national data; and trustee and medical staff minutes of six Baltimore hospitals, interviews with and written records of Blue Cross plan founders, and journal and newspaper articles to trace the history of Baltimore's hospital market as a case study.

FINDINGS:
The author reports that hospitals grew rapidly in the last quarter of the nineteenth century in response to various forces associated with immigration, urbanization and industrialization. In order to finance growth and rising costs in the early twentieth century, Baltimore' voluntary hospitals competed intensely for paying patients. In the process, they encountered a conflict between the exigencies of market competition and charity care; many hospitals sacrificed the latter. After World War I, a three-tiered hospital sector evolved in which Baltimore's teaching hospitals treated both paying and charity acute-care patients; most other voluntary hospitals treated mainly paying patients; and the municipal hospitals picked up indigent acute and chronic cases. During the Great Depression, voluntary hospitals created a unique system of local monopolies in hospital prepayment to finance their own services.

RECORD NO. HS03831 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - HOSPITAL STUDIES

TITLE: Impact of "Per-Case" Versus "Per-Service" Hospital Reimbursement

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-82	111,735	215,347	360,807	STEINWACHS, DONALD M JOHNS HOPKINS UNIVERSITY CHARLES AND 34TH STS BALTIMORE MARYLAND 21218

OBJECTIVE:
To compare the impact of two prospective reimbursement (PR) mechanisms in Maryland -- "per case" and "per service" -- on hospital costs, productivity and patterns of care.

APPROACH:
Maryland has established a Health Services Cost Review Commission (HSCRC) while also having instituted prospective service-specific rates with each hospital. These rates are periodically adjusted to reflect national indices of inflation. Most recently, selected hospitals have been put on a "per case" system called Guaranteed Inpatient Revenue (GIR) that sets a fixed level of revenue per admission classified by diagnosis. Using a before and after analysis of hospital discharge data and reviewing accounting reports for comparison with hospitals not under GIR, the impact of GIR will be evaluated. Currently, 17 of 46 non-Federal acute care hospitals in Maryland are under GIR arrangements. Various specific hypotheses are to be tested using primarily a multiple regression technique. A number of independent and dependent variables along with their expected relationship are identified for testing various hypotheses focused on length of stay; use of ancillary service, cost per day, and total cost.

FINDINGS:
This is an evaluation of a unique program of reimbursement, which appropriately builds upon and extends results of previous evaluations of prospective (per-service) reimbursement. These evaluations documented small (but not statistically significant) savings. Prospective reimbursement is viewed as an important way to control hospital costs and new and more sophisticated versions are now being developed. Findings will be based on analysis of data from several sources, including hospital discharge data, HSCRC expenditure and budgeting data by hospital and by volume of services along with Medicare and Maryland Medicaid data.

RECORD NO. HS04217 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - HOSPITAL STUDIES

TITLE: An Investigation Into Hospital Ownership Structure

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-80	06-30-82	31,935	31,935	31,935	SCHNEIDER, MICHAEL H NORTHWESTERN UNIVERSITY EVANSTON ILLINOIS 60201

OBJECTIVE:
To study recent changes in the methods of financing capital investment in the hospital industry and focus on the causes and effects of increased reliance on debt throughout the hospital industry; debt being the primary source of funds replacing both government assistance and philanthropy.

APPROACH:
The project design is broken into six phases. Phase 1 will analyze the full implications of previous models of hospital behavior for financial decisionmaking. Phase 2 will evaluate the applicability of research on the effects of regulation on the financial decisions of regulated industries. Phase 3 will develop a model (based on the output of Phases 1 & 2) of hospital valuation incorporating the impact of reimbursement. Phase 4 will evaluate the determinants of the supply and demand for different types of funds (based on the models developed in Phase 3). Phase 5 will test the theoretical results from Phases 3 & 4. Data is available from the American Hospital Association's annual survey of hospitals and new construction. Phase 6 will analyze policy implications of the research.

FINDINGS:
It is anticipated that the proposed research will lead to a fuller understanding of the determinants of the hospital's capital structure and financial decisionmaking. This research will also: develop understanding of the potential for intervention via the sources of funds for expansion; develop a conceptual framework for analyzing the impact on both the suppliers of funds and the hospitals of proposed changes in the provision for reimbursement of capital costs; and yield insights into the impact the hospital's increased reliance on debt could have on health planning, regulation, and rate review.

RECORD NO. HS04247 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - HOSPITAL STUDIES

TITLE: Hospital Services Coordination by Triad Management

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-80	09-30-81	32,980	32,980	32,980

INVESTIGATOR NAME AND ADDRESS

HERDMAN, BRUCE W
UNIVERSITY OF PENNSYLVANIA

PHILADELPHIA
PENNSYLVANIA 19104

OBJECTIVE:
To develop a systematic explanation of the positive and negative effects of "Triad Management Systems", which charge an administrator, nurse and physician with joint reponsibility for management of a hospital unit to improve coordination of services, and to provide a theoretical background to improve the technology and organizational design of the systems.

APPROACH:
A comparative analysis of data collected through case studies will be performed to develop a grounded theory of how Triad Management might coordinate unit level service in large university medical school hospitals. Two Triad managed units of a medical school hospital will be compared to similar but hierarchically organized units in a comparable hospital. Data will be collected by non-participant observation, interviews and questionnaires. These data will examine how Triad members manage problems of task uncertainty, coordination, and conflict resolution in a setting of strong external norms. Data from these hospitals will also be compared to data obtained from four other hospitals which use or have used some form of Triad Management.

FINDINGS:
This research will identify and describe the characteristics and dynamics of coordination and management difficulties at the unit level in hospitals. In addition, it will describe ways in which Triad Management resolves, or is likely to resolve, these problems. Finally, it is expected to elaborate a theory to guide the design of mechanisms to improve coordination in hospital units.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. 233783001 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - HOSPITAL STUDIES

TITLE: Development of Data Files on Hospital Utilization & Community Characteristics

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
01-12-78	12-11-81	102,212	2,101,815	2,458,379	MCCORD, JOHN J SYSTEMETRICS, INC 222 EAST ANAPAMU STREET SANTA BARBARA CALIFORNIA 93101

OBJECTIVE:
To develop a series of data files on a national sample of 450 non-federal short-term general and 50 Veterans Administration general medical and surgical hospitals to support the Hospital Cost and Utilization Project.

APPROACH:
Four primary data files are being constructed for the years 1970-77; a) Hospital characteristics, costs, & revenues; b) Patient characteristics and use of services; c) Physician characteristics; d) Community socio-demographic & medical market characteristics. Only secondary sources of data are being used. The data files are subject to strong confidentiality measures regarding access and use.

FINDINGS:
The results of the planned research should enable better understanding of the behavior of the hospital, especially regarding the determinants of case mix and service intensity, and should assist in formulating and evaluating policies on reimbursement, capital acquisition, and medical staffing patterns.

RECORD NO. HS02132 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - DRUG STUDIES

TITLE: Evaluation of the Impact of Drug Substitution Legislation

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-30-76	03-31-81	0	861,374	861,374	GOLDBERG, THEODORE WAYNE STATE UNIVERSITY DETROIT MICHIGAN 48202

OBJECTIVE:
To examine the effects of legislation aimed at reducing prescription drug costs by substitution of generic equivalents.

APPROACH:
Grantee will collect data on substitutable prescriptions in Michigan (state with substitution legislation) and in Wisconsin (control state). Pharmacy students will collect information on drug names, strength, quantity, payment sources, prescriber, etc. A sample of 100 to 130 pharmacies will be selected with 800 to 1000 prescriptions reviewed in each. Drug price will be analyzed by time period, therapeutic category, percent of drugs prescribed potentially substitutable, and percent actually substituted.

FINDINGS:
It is expected that analysis will show that prices will be lower, that doctors will write "Dispense as Written" less frequently, and pharmacists will exercise their substitution potential more often and thus demonstrate cost containment in the state with drug substitution legislation.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS02658 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - DRUG STUDIES

TITLE: Expansion of the Iowa Capitation Study

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
03-01-78	02-28-83	315,107	684,810	1,192,497	YESALIS, CHARLES E III UNIVERSITY OF IOWA IOWA CITY IOWA 52242

OBJECTIVE:
To study the major problems that were apparent in a pilot project which evaluated the effects of capitation payment to pharmacies for drugs dispensed to Iowa Medicaid patients and to test capitation reimbursement on a larger portion of Medicaid population of the state, including several metropolitan areas.

APPROACH:
The proposed study has 3 phases. During Phase I capitation rates will be determined, educational and pharmacist prompting packages developed, and administrative problems resolved. Phase II will encompass the institution of capitation payment for the Medicaid drug program in half the state. After the first 8 months of Phase II an evaluation will be made in terms of the cost & quality of drug therapy comparing capitation to fee-for-service. If the results are positive, Phase III will include expansion of capitation payment to a state-wide basis with a replication of the cost and quality assessments. The system encourages pharmacists to reduce their costs, switching to nonprescription or generic equivalents where appropriate, & increasing the quantity of the drug dispensed to reduce the frequency of dispensing. Under the capitation system, Medicaid recipients select a regular pharmacist for services. The pharmacists then receive a monthly capitation fee based on the number of recipients on their rolls, equal to 85% of the estimated per capita costs for drugs & dispensing services

FINDINGS:
Preliminary findings indicate that the pharmacists readily accept the new system of reimbursement. In addition, it is apparent that both the pharmacists and the State of Iowa could significantly reduce administrative costs involved in filing and processing Medicaid drug claims. Finally, the data indicate that the pharmacists did modify their behavior in order to pare ingredient costs.

RECORD NO. HS03305 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - DRUG STUDIES

TITLE: Improving the Quality of Drug Use in Nursing Homes

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-79	06-30-82	209,234	432,581	680,508

INVESTIGATOR NAME AND ADDRESS

PALUMBO, FRANCIS B
UNIVERSITY OF MARYLAND AT BALTIMORE
525 W REDWOOD ST
BALTIMORE
MARYLAND 21201

OBJECTIVE:
To demonstrate the improvement of drug use in nursing homes and its effect on certain patient outcomes and variables through Drug Use Review (DUR) feedback mechanisms, and educational programs designed for physicians, nurses and patients.

APPROACH:
The study will be carried out in three phases at approximately 35 nursing homes in the Baltimore-Washington area. Criteria will be developed for appropriate geriatric prescribing of a select group of drugs; and protocols will be developed for appropriate patient use of these drugs. With the aid of a computerized DUR system which will be refined, problems with appropriateness of drug prescribing and use will be identified. Then through mechanisms of DUR feedback for physicians, and education of some physicians, nurses and patients, any improvements in drug prescribing or use associated with the program will be delineated. The effects of appropriate and inappropriate drug prescribing and use on patient outcome measures will be recorded. Costs of the DUR feedback study and the patient, nurse, and physician education project will be documented. Finally, these program costs will be related to observed effects of appropriate and inappropriate prescribing and use on patient outcome measures.

FINDINGS:
The study is valuable in that it proposes to demonstrate an approach to the improvement of drug prescribing. Resources will be developed including a computerized drug utilization review system, protocols for geriatric drug prescribing, educational strategies, and reinforcement mechanisms.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS03698 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - DRUG STUDIES

TITLE: Drug Prescribing Quality and Length of Hospital Stay

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
04-01-79	06-30-81	0	51,104	51,104

INVESTIGATOR NAME AND ADDRESS

KNAPP, DAVID A
UNIVERSITY OF MARYLAND AT BALTIMORE
525 W REDWOOD ST
BALTIMORE
MARYLAND 21201

OBJECTIVE:
To determine the relationship between drug prescribing quality and improvement in patient outcomes as reflected in length of hospital stay.

APPROACH:
This is a quasi-experimental study involving 4 acute care general hospitals in Baltimore, Maryland. A retrospective review of charts of patients with a diagnosis of pyelonephritis (confirmed by laboratory tests) and without concurrent medical problems is to be made. Three types of explicit prescribing criteria are to be employed to judge the appropriateness of prescribing (cases qualifying for the study, the disease entity, and the appropriateness of a variety of aspects of drug prescribing, including choice of drug, route and dosage, length of therapy, and monitoring of drug effects). Information regarding length of stay; age, sex, and weight; and concurrent use of non-antimicrobial drugs and time of initial drug order are to be obtained. Cases will be categorized as having received appropriate or inappropriate drug therapy. Analyses will be carried out to examine differences between groups in length of stay and other variables, such as severity of illness and source of payment. The generalizability of the findings will be tested by repeating the study on another infectious disease.

FINDINGS:
Since most hospital patients receive drugs and wide variations in prescribing patterns have been reported, improvement in the quality of prescribing could be cost beneficial as well as effective in improving the quality of hospital care. Preliminary work suggests that inappropriate prescribing leads to greater lengths of hospital stay in selected disease states. These early findings, obtained in a pilot study, have important implications for cost containment and quality of care issues.

RECORD NO. HS03899 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - DRUG STUDIES

TITLE: Methods to Improve Quality of Physician Prescribing

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	06-30-83	286,263	528,649	906,381	SCHAFFNER, WILLIAM VANDERBILT UNIVERSITY NASHVILLE TENNESSEE 37240

OBJECTIVE:
To evaluate methods to improve prescribing which educate the prescribing physician. The vehicle for the assessment will be a controlled prospective experiment to ascertain the effectiveness and costs of three education intervention modalities. These interventions are designed to reach those physicians whom earlier studies have identified as inappropriate prescribers.

APPROACH:
Demonstrate and evaluate the content of an educational intervention consisting of nine topics. Each topic focuses upon a small, closely related family of drugs for which there is evidance that a reduction in prescribing is synonymous with improved quality of care. The interventions using these nine topics will be grouped into three cycles of three modules each. Cycle 1 will be confined to specific antibiotics, the indications and contraindications for which are well defined, accepted by authorities and based on reported evidence. Cycle 2 will involve psychotrophic drugs, the indications for which are not precise and for which guidelines are less well known and accepted but which are regarded to be subject to overuse and abuse. Cycle 3 will encompass three different classes of drugs which are the recent subject of either changing indications or controversy; the widely used analgesic propoxyphene, oral hypoglycemics for diabetic children, and phenothiazine antiemetics for children.

FINDINGS:
Brochures have been prepared for 5 modules (four antibiotics, major tranquilizers); four of which have already been used in the field. Post-intervention monitoring is now under way for the antibiotic modules and is scheduled for completion late this year. No analysis of data has yet begun. The proposed study will provide data for policy makers concerning the efficacy, physician acceptance, and costs of alternative techniques to improve prescribing. The information derived from this study is likely to be directly relevant to program planning at both local and Federal levels of government. The results should have widespread applicability because techniques are used with topics covering a wide spectrum of therapeutic agents. The patients prescribed for in this study represent those who are often the subject of poor prescribing - the poor, children, the elderly, those who live in rural areas, and subjects who are primarily non-white.

RECORD NO. HS03921 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - DRUG STUDIES

TITLE: Prescriber Rationale in a Pharmacy Capitation Project

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
08-01-79	10-31-80	2,339	35,485	35,485	HELLING, DENNIS K UNIVERSITY OF IOWA IOWA CITY IOWA 52242

OBJECTIVE:
To explore the dimensions of the relationships between physicians and pharmacists which may help to account for the extreme variations found among the experimental pharmacies in rates of generic substitution of prescriptions for Medicaid patients, and to explore the rationales of physicians for aberrant or questionable prescribing patterns which may be detected as a result of a quality analysis of the prescription data.

APPROACH:
This project will provide an additional analysis of a currently funded study to conduct an analysis of selected beliefs, attitudes, and behavior of the participating pharmacists and physicians in the Iowa Medicaid program. The investigators will use open-ended interviews of both physicians and pharmacists to obtain information on selected beliefs, attitudes, and behavior of the participating pharmacists and of the physicians who wrote the majority of the prescriptions filled by those pharmacists. Both of the two intertwined objectives involve integrating already collected prescription data with data to be obtained from semi-structured, open-ended personal interviews with the pharmacists and physicians. To our knowledge, this will be the first time this technique has been systematically used to explore the rationales of the prescribing patterns of physicians and the views of physicians on the role of the pharmacist in the drug product selection.

FINDINGS:
This supplementary project will obtain information about issues not addressed in the currently funded capitation experiment; namely of understanding pharmacist behavior under altered financial incentives and of understanding physician-pharmacist interaction.

RECORD NO. HS03971 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - DRUG STUDIES

TITLE: Assessing Ambulatory DUR Cost-Effectiveness

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	03-31-82	10,410	34,970	34,970	TREMBLAY, JACQUES LAVAL UNIVERSITY CITE UNIVERSITAIRE QUEBEC CANADA

OBJECTIVE:
To evaluate the impact of a Drug Utilization Review (DUR) Program on quality and economy of prescribing.

APPROACH:
A quasi experimental design will be utilized in an ambulatory Drug Utilization Review Program in Le Centre hospitalier de l'Universite Laval (CHUL) with Hospital Laval (HL) service as a control. Physician prescribing will be monitored at both institutions with peer review feedback being provided CHUL over the 6 - quarter observation period. In each of the 6 observation periods a random sample of 1,000 prescriptions will be analyzed to assess cost and quality.

FINDINGS:
The study will provide a measure of efficacy for a quality assurance mechanism under quasi experimental conditions and will address cost variation possibly attributed to quality assurance. To the extent this project involves payment under the Canadian Health Insurance System for drugs provided at ambulatory care facilities, it might have decided policy implications for the NCHSR's priority area of health insurance.

RECORD NO. HS03601 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - COST CONTAINMENT STRATEGIES

TITLE: Medical Costs of Cigarette Smoking

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	12-31-81	57,475	128,895	128,895	VOGT, THOMAS M KAISER FOUNDATION RESEARCH INSTITUTE 4610 SE BELMONT ST PORTLAND OREGON 97215

OBJECTIVE:
To estimate the cost differential in providing medical care to cigarette smokers, former smokers, non-smokers and their families to examine the relationship between type of smoking behavior and the utilization of medical services; and study the effects of cessation of smoking.

APPROACH:
The study will examine the relationship between smoking behavior and the utilization of health services over the period 1969-1974. The household Interview Survey, conducted by the Kaiser Health Plan in 1970-1971 and covering 2,502 members will provide information on smoking habits. These data will be linked to inpatient and outpatient records maintained by the plan. Bivariate, multivariate and discriminant analysis will be used to derive estimates of utilization and total costs of medical services for the different study groups.

FINDINGS:
The study will provide new information regarding relative costs of various types of smoking behavior, including cessation and lifelong abstinence from smoking.

RECORD NO. HS03603 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - COST CONTAINMENT STRATEGIES

TITLE: Competition as a Means to Contain Dental Care Costs

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-79	12-31-80	0	48,948	48,948	CONRAD, DOUGLAS A UNIVERSITY OF WASHINGTON SEATTLE WASHINGTON 98195

OBJECTIVE:
To determine the impact of State dental practice acts and professional ethical codes on levels and variations of prices for dental services.

APPROACH:
Based on State dental practice acts and State dental associate ethical codes from 1970, 1971 and 1976, nominal measures will be derived concerning the restrictiveness of such rules with respect to advertising and soliciting of patients, employment and scope of duties of auxiliaries, and the "corporate" practice of dentistry. Data concerning dental services and prices will be gathered from the 1970 National Dental Fee Survey, the 1971 Bureau of Labor Statistics price quotations, and the 1976 Research Triangle Institute survey of dental practices. A multivariate regression model will be developed to test various hypotheses concerning the relationship between legal and ethical restrictions and the level and variations of prices for dental services.

FINDINGS:
This research examined the effects on dental care prices of five types of state dental practice act provisions: limits on interstate reciprocity of dentist licensure; dental advertising; number of offices a dentist may own and operate; number of hygienists a dentist may employ; and the tasks which may be delegated to auxiliary personnel. Econometric analyses reveal the following pattern of findings: in the 1970 state data only reciprocity limits are related to significantly increased dental prices; in the 1971 data for metropolitan areas, limits on number of offices and number of hygienists imply significantly higher prices; and in the 1976 practice-specific data, only the limits on reciprocity and number of hygienists are related to significantly higher prices. Directions for future research should focus on finding natural experimental conditions for testing effects of such laws and on refining knowledge of how these practice act provisions have evolved over time.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS03634 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - COST CONTAINMENT STRATEGIES

TITLE: The Benefits and Costs of Anti-Smoking Policies

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-28-79	12-31-81	31,866	81,556	99,410	WARNER, KENNETH E UNIVERSITY OF MICHIGAN ANN ARBOR MICHIGAN 48109

OBJECTIVE:
To study the effects of anti-smoking policies on cigarette consumption and tobacco-producing economy, and to assess the total costs and benefits of these policies.

APPROACH:
Estimates will be made on: (1) the nature and amount of the social costs of smoking and of discouraging smoking; (2) the distribution of costs and benefits of smoking across individuals and states with emphasis on the effects of anti-smoking policies on tobacco-producing states; (3) the effects on cigarette consumption of various government policies, such as taxation, media-campaigns, and bans on smoking in public places; and (4) the costs and benefits of specific anti-smoking campaigns. Literature reviews and discussion with authorities in the field will form the basis for further, more intensive exploration of the issues. Multiple regressions, cost/benefit analysis, and sensitivity analysis will be performed. Time series and cross sectional data will come from secondary sources, including the U.S. Dept. of Agriculture and the Tobacco Tax Council. Consumption effects will be linked with health outcomes and economic values to derive total costs and benefits.

FINDINGS:
The growing disparity in cigarette prices between tobacco-producing and other states has increased bootlegging of cigarettes. Per capita cigarette consumption has declined since 1973, reflecting a new nonsmoking ethos and legislative success. From 1972 to 1978, the number of states with antismoking laws grew from 5 to 36, and their restrictiveness also increased. Time series regression analysis suggests that, in the absence of the antismoking campaign, consumption would have exceeded its 1978 level by more than a third. The project is also studying the costs and benefits of antismoking policies and the impacts on the economies of the tobacco-producing states.

RECORD NO. HS03738 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - COST CONTAINMENT STRATEGIES

TITLE: The Potential for Using Taxes to Reduce Smoking

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
08-01-79	11-30-81	23,381	52,368	52,368

INVESTIGATOR NAME AND ADDRESS

LEWIT, EUGENE M
COLLEGE OF MEDICINE AND DENTISTRY OF N J
100 BERGEN ST
NEWARK
NEW JERSEY 07103

OBJECTIVE:
To investigate empirically the impact of differential prices, as represented by differences in State and local cigarette taxes, on the extent of smoking by adults. Particular attention will be given to development of estimates of the price elasticity of demand, i.e. the effect of changes in prices on the number of cigarettes consumed, and the effect of other characteristics, such as health status, age, sex and income.

APPROACH:
The project will estimate the demand for, and consumption of, cigarettes, using data from the Health and Nutrition Examination Survey and the Health Interview Survey, reported by the National Center for Health Statistics, together with price and tax data reported by the Tobacco Tax Council. Multiple regression techniques will be used to estimate demand functions for a sample of States having high taxes (New York, Pennsylvania) and low-tax states (North Carolina). The extent of "smuggling" in responses to high taxes and the effect of higher prices on cessation of smoking will also be studied. In the latter case, smokers will be classified and studied separately by extent and duration of smoking.

FINDINGS:
The preliminary analysis shows that cigarette smoking by teenagers and young adult males is quite responsive to price (with price elasticity of -1.4), while older adults are not responsive. The overall price elasticity appears to be approximately -.4. Cigarette bootlegging and the effects of state taxes on cigarette consumption will also be studied.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS04026 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - COST CONTAINMENT STRATEGIES

TITLE: The Cost Dynamics of Critical Illness

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
04-01-80	03-31-82	107,223	107,223	222,137	GERTMAN, PAUL M. BOSTON UNIVERSITY 80 EAST CONCORD STREET BOSTON MASSACHUSETTS 02118

OBJECTIVE:
To study the factors influencing the treatments and the costs for critically ill patients (including socio-economic factors and the process of physician decision making).

APPROACH:
The study will combine retrospective and prospective studies of expenditures on behalf of critically ill patients. Expenditures will be separated out for palliative vs aggressive treatment; for research related vs medically mandatory care; and for routine vs ancillary services. Multiple regressions will be undertaken. Data include patient medical records, patients bills and physician questionnaires drawn from (1) medical intensive care unit, (2) cardiac intensive care unit, (3) surgical intensive unit, and (4) oncology (cancer) unit of Boston University Hospital. Data by ward, by day and by diagnosis, etc., as well as by patient will be collected.

FINDINGS:
The proposed research can provide information on various costs of critical illnesses and their influencing factors. It should provide important insights into the determinants of decision making by the physicians. Thus, it will be useful for policymakers with regard to medical care costs, reimbursement and catastrophic insurance.

RECORD NO. HS04097 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - COST CONTAINMENT STRATEGIES

TITLE: Incentives for Improving Productivity in Health Care

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
01-01-80	09-30-80	35,860	35,860	35,860	CAPER, S PHILIP UNIVERSITY OF MASSACHUSETTS MEDICAL SCH 55 LAKE AVE N WORCESTER MASSACHUSETTS 01605

OBJECTIVE:
To develop a program and priorities for research in the area of incentives for productivity improvement and to develop alternatives and recommendations for future policy.

APPROACH:
The grantee will convene a conference to discuss incentives for productivity improvement, attended primarily by purchasers and consumers of health care; business, labor, consumer groups, third-party payors, government policy-makers and others who have a major stake in paying for health care. The conference will develop a research agenda and policy recommendations in three areas: productivity in health care institutions, manpower productivity and health care technology.

FINDINGS:
Productivity improvement is seen as a major factor in containing costs and slowing the present high rate of inflation in health care and in the economy in general, and hence this area is receiving a high priority. The conference produced several papers in the areas of institutional productivity, labor productivity, and technological productivity and provided significant inputs to a report on incentives for increased productivity, published by the National Council on Health Planning and Development. The conference produced a number of policy recommendations for actions which could result in improvement in health care productivity.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS04111 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - COST CONTAINMENT STRATEGIES

TITLE: Reducing Clinical Laboratory Costs

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-80	08-31-83	124,502	124,502	395,753	SHEINER, LEWIS B UNIVERSITY OF CALIFORNIA SAN FRANCISCO 3RD AND PARNASSUS AVE SAN FRANCISCO CALIFORNIA 94143

OBJECTIVE:
To identify laboratory tests which contributa no significant new information in diagnosis or therapy (termed conditionally useless tests) and to test the impact on test ordering of an intervention which would discourage the requesting of such tests.

APPROACH:
"Conditionally useless" tests will be identified by examining a special data base formed by integrating information from three separate computer systems: the laboratory computer system, the hospital accounting system (patient billing data), and the McAuto discharge analysis system (discharge diagnosis). The identified conditionally useless tests will be validated and then reviewed by a medical review board to determine clinical acceptability for the study. The acceptable conditionally useless tests will be employed in a before and after study of the effects of limiting the physician in his ordering of these tests. All non-stat requests will be examined by the computer shortly after they have been requested. Deferrable conditionally useless laboratory test requests will not be honored; but the physician will be given an opportunity to override this limitation by requesting the test again by telephone.

FINDINGS:
The expected findings are a verification that there are a number of conditionally useless tests, a trend in which the physician will restrict his ordering of conditionally useless tests, and a significant projected savings in the cost of health care.

RECORD NO. HS04238 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - COST CONTAINMENT STRATEGIES

TITLE: Pricing and Efficiency in Medical Group Practice

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-80	08-31-81	31,935	31,935	31,935	GAYNOR, MARTIN S NORTHWESTERN UNIVERSITY EVANSTON ILLINOIS 60201

OBJECTIVE:
To analyze two questions about the economic behavior of medical group practice: Can productive efficiencies found to exist in group practice be translated into lower prices to the consumer? Does the positive relation between price and physician supply exist for medical group practice, and if so, which of two theories--increasing monopoly or target-income--applies?

APPROACH:
These two questions will be studied by specifying and estimating price functions which include variables that generate testable hypotheses about price and productive efficiencies and price and physician supply. The data that will be used in this analysis have been collected by Mathematical Policy Research, Inc., from March to June of 1978. Detailed information was obtained from 957 groups and 6,342 physicians practicing in these groups.

FINDINGS:
This study represents a first step towards analytic findings useful for policymaking to expand the extent of medical group practice based on the assertion of less costly medical care, as well as determining if various efficiencies found in group practice result in lower prices to consumers. The main thrust in the literature has been whether or not economies of scale exist in group practice. No studies (to the best of the author's knowledge) have been done to determine whether any cost savings found in group practice are reflected in the fees consumers pay. This project, therefore, will provide an essential link between research previously done and information needed for actual policymaking.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. 233793012 CATEGORY: HEALTH CARE COSTS AND EXPENDITURES - COST CONTAINMENT STRATEGIES

TITLE: Case Studies of Health Promotion & Disease Prevention in the Workplace

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	04-30-81	0	203,460	203,460	ROMM, JOSEPH SYSTEM SCIENCES, INC 4340 EAST-WEST HIGHWAY BETHESDA MARYLAND 20014

OBJECTIVE:
To determine the characteristics, content, and target populations of health promotion and disease prevention (HPDP) programs in the workplace; identify and describe selected HPDP programs viewed by sponsors, as successful; determine the process of adoption and implementation; assess the adequacy of available information for cost and benefit analysis, and identify research issues.

APPROACH:
The methods used were: review of published and unpublished literature; identification of HPDP ongoing successful programs in the workplace; consultation with HPDP experts to identify programs not described in literature; contact with identified programs to secure or confirm data on HPDP programs; and analysis of data to provide guidance for policy makers in research and HPDP programming.

FINDINGS:
Final Report includes an executive summary, synthesis of available literature, summary of HPDP components, annotated bibliography, individual program summaries, and research and policy recommendations. One hundred and seventy five published and unpublished papers and reports are reviewed. The literature is dated two to five years behind program's current status, and articles are descriptive, not analytical. Sixty-five programs were identified and contacted by mail, with 20 programs summarized in detail. HPDP programs seem to be primarily concerned with behavior modification (Lifestyle). The four most common components are nutrition and weight control, smoking cessation, stress management, and physical fitness, with nutrition the most common. Programs varied extensively in population covered, quantity, and quality. There are no uniform standards by which programs can be gauged. Services are provided mainly by non-medical personnel. Twenty-three programs had a health hazard appraisal component. The data include the number of programs with various components. There are no cost data. The majority of programs were introduced in the last five years.

RECORD NO. 233793014 CATEGORY: DISSEMINATION - DISSEMINATION

TITLE: Synthesis and Dissemination of Research Findings on Distribution and Effectiveness of Health Professions Manpower

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	04-30-81	0	185,284	185,284	KIDDER, DAVID ABT ASSOCIATES, INC 55 WHEELER STREET CAMBRIDGE MASSACHUSETTS 02138

OBJECTIVE:
Provide an overview of research on shortages/surpluses of physicians; recruitment and retention of nurses in hospitals; and the effects of professional regulations.

APPROACH:
The literature is in a general agreement that shortages at the specialty, geographical area, and institutional levels remain a serious issue for both physician and nursing personnel. The research reviewed in this study explored factors that tend to increase or restrict the supply of health services at the "micro" level. These factors include monetary incentives (wages, fees and income), institutional barriers that restrict supply by limiting entry or curtailing "effort" (nurses' unions, practice arrangements of physicians), personal and family characteristics that affect location and effort, societal barriers (such as racial discrimination) and regulations set by States and professional associations.

FINDINGS:
Research suggested that general surgeons may use their power in the patient/doctor relationship to maintain high fees on elective surgery rather than convince their patients to undergo more elective surgery. In this way, they can protect their incomes. Nurses' wages rose faster than wages in any other female dominated occupation in the late 1960's and early 1970's. The success of agencies that supply nurses on a part time basis, at pay rates higher than could be earned in most hospitals, suggest that pay and a flexible schedule are important considerations for some nurses. Research has made much of the influence of attitudes and personal/family characteristics on career decisions of nurses and physicians. Data show that these are related to the availability of jobs, employment status, occupation of spouse, types of practices available, and personal history. Research also shows that race influences location, participation, and job satisfaction of nurses as well as specialty/location and practice pattern decisions of physicians. While the credentialing process is important for entrance into the labor market, its affect on competence and quality of care has not been demonstrated in the literature.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. 233793016 CATEGORY: DISSEMINATION - DISSEMINATION

TITLE: Synthesis and Dissemination of Research Findings on HMO Operation and Performance

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	01-05-83	0	280,697	425,545	MELTZER, ALFRED APPLIED MANAGEMENT SCIENCES INC 962 WAYNE AVENUE SILVER SPRING MARYLAND 20910

OBJECTIVE:
To synthesize extant research findings, expert opinion and descriptive information on the operations and performance of HMOs, and to disseminate such information to key health leaders at the state and local level through the planning and conduct of dissemination workshops.

APPROACH:
A 100-150 page synthesis and a 25 page summary will be prepared on various aspects of HMO operations and performance, including: cost, utilization, quality of care, preventive services, consumer & physician satisfaction, competitive impact, internal organizational factors affecting HMO performance, and external factors affecting HMO performance. A pilot dissemination workshop will be conducted for an audience of key health leaders from the public and private sectors of the health care delivery system to communicate the current state-of-the-art with respect to HMO operations and performance.

FINDINGS:
Expected results of the contract include the preparation and distribution of a synthesis of research findings, expert opinion and descriptive information analyzing and summarizing what is known and what is not known about HMO operations and performance in a manner which focuses research findings and practical experience on the policy issues and operational problems of state and local government health officials and the private sector. Areas in which research and practical experience is weak, limited, contradictory or inconclusive will be identified, along with areas in which further research is required in order to assess the performance and potential impact of HMOs on the health care delivery system and the market for health services. Expected results also include the dissemination of both public and private settings.

RECORD NO. 233793017 CATEGORY: DISSEMINATION - DISSEMINATION

TITLE: Synthesis and Dissemination of Research Findings on Health Promotion and Disease Prevention Intervention Strategies

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	01-31-81	0	189,589	189,589	DANE, J K POLICY RESEARCH, INC 2500 NORTH CHARLES STREET BALTIMORE MARYLAND 21218

OBJECTIVE:
To synthesize extant research findings, expert opinion and descriptive information on intervention strategies and ongoing programs designed to promote health and prevent disease through the modification of lifestyle behaviors; to disseminate such synthesized information to key health leaders at the state and local level through the planning and conduct of dissemination workshops.

APPROACH:
A 100-150 page synthesis and a 25 page summary will be prepared on various intervention strategies and ongoing programs designed to modify lifestyle behavior in the following areas: physical activity; nutrition and dietary patterns; substance abuse (i.e., cigarette smoking, inappropriate use of alcohol and misuse of licit drugs); and other health influencing behaviors (e.g., patient compliance, stress, hypertension and non-use of safety devices). A pilot dissemination workshop will be conducted for an audience of approximately 40 key health leaders from the public and private sectors of the health care delivery system at the state and local level, designed to communicate the current state-of-the-art with respect to available strategies, ongoing programs and their impact, costs and effectiveness.

FINDINGS:
Expected results of the contract include the preparation and distribution of a synthesis of current knowledge and experience relating to the modification of lifestyle behaviors in a manner which focuses findings and information on the policy issues and operational problems of state and local health leaders. Areas in which research and practical experience is weak, limited, contradictory or inconclusive will be identified, along with areas in which further research is required in order to assess the cost and effectiveness of such strategies and programs. Expected results also include the dissemination of current information and finding to audiences of state and local government officials and private sector representatives through the planning and conduct of dissemination workshops.

RECORD NO. 233793018 CATEGORY: DISSEMINATION - DISSEMINATION

TITLE: Synthesis & Dissemination of Health Services Research Findings for State and Municipal Health Leaders

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	04-30-81	0	350,787	482,310	LEWIN, LAWRENCE S LEWIN AND ASSOCIATES, INC 470 L'ENFANT PLAZA SW WASHINGTON DISTRICT OF COLUMBIA 20024

OBJECTIVE:
To identify and describe key policy issues and operational problems in the States of Florida, Illinois, and Michigan through direct interaction with key health leaders in those jurisdictions; to prepare syntheses on identified issues and problems; and to disseminate synthesized information through the planning and conduct of dissemination workshops.

APPROACH:
Approach encompasses the identification of key health leaders in the three jurisdictions selected; the conduct of meetings and interviews with key health leaders to determine and describe priority health services policy issues and operational problems; the preparation of syntheses of extant research findings, expert opinion and descriptive information on 3-5 identified issues and problems; and the planning and conduct of dissemination workshops to transmit synthesized information through the planning and conduct of dissemination workshops.

FINDINGS:
Expected results of the contract include the preparation and distribution of syntheses of research findings, expert opinion and descriptive information on priority health policy issues and operational problems identified by key health leaders in Florida, Illinois and Michigan. Areas in which research and descriptive information is weak, limited, contradictory or inconclusive will be identified, along with areas of future research. Expected results also include the conduct of dissemination workshops for key health leaders in the jurisdictions selected.

RECORD NO. 233793025 CATEGORY: DISSEMINATION - DISSEMINATION

TITLE: Synthesis & Dissemination of Health Services Research for State and Local Health Leaders

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	02-12-82	0	309,350	352,179	KLEIN, SUSAN WESTERN INTERSTATE COMM FOR HIGHER ED P.O. DRAWER P BOULDER COLORADO 80302

OBJECTIVE:
To identify and describe key policy issues and operational problems in the States of Colorado and Wyoming, and the municipality of Denver through direct interaction with key health leaders in those jurisdictions; to prepare syntheses on identified issues and problems; and to disseminate synthesized information through the planning and conduct of dissemination workshops.

APPROACH:
Approach encompasses the identification of key health leaders in the jurisdictions selected; the conduct of meetings and interviews with key health leaders to determine and describe priority health services policy issues and operational problems; the preparation of syntheses of extant research findings, expert opinion and descriptive information on 3-5 identified issues and problems; and the planning and conduct of dissemination workshops to transmit synthesized information to key health leaders in Denver, Colorado and Wyoming.

FINDINGS:
Expected results of the contract include the preparation and distribution of syntheses of research findings, expert opinion and descriptive information on priority health policy issues and operational problems identified by key health leaders in Denver, Colorado and Wyoming. Areas in which research and descriptive information is weak, limited, contradictory, or inconclusive will be identified, along with areas of future research. Expected results also include the conduct of dissemination workshops for key health leaders in the jurisdictions selected.

RECORD NO. 233803001 CATEGORY: DISSEMINATION - DISSEMINATION

TITLE: Synthesis & Dissemination of Research Findings on Hospital Rate Control Program

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
10-16-79	10-01-81	171,884	171,884	180,570	BERRY, RALPH E, JR POLICY ANALYSIS, INC 1577 BEACON STREET BROOKLINE MASSACHUSETTS 02146

OBJECTIVE:
To synthesize extant research findings, expert opinion and descriptive information on the organization, operation and impact of hospital rate control programs in 15 states, and to disseminate such information to key health leaders at the state and local level through the planning and conduct of dissemination workshops.

APPROACH:
A 100-150 page synthesis and a 25 page summary will be prepared on various characteristics of hospital rate control programs in 15 states, including: enabling legislation; program goals and objectives; organizational structure; scope of coverage; administrative procedures; program features and techniques; and program impact. A pilot dissemination workshop will be conducted for an audience of approximately 40 key health leaders from the public and private sectors of the health care delivery system at the state and local level, designed to translate research findings, expert opinion and descriptive information into a practical and operational base of information for state and local health policymakers, planners, regulators, insurers and hospital industry officials.

FINDINGS:
Expected results of the contract include the preparation and distribution of synthesis of the current state-of-the-art on the organization, operation and impact of 15 hospital rate control programs in a manner which focuses research findings and practical experience on the policy issues and operational problems of public and private health officials at the state and local level. Areas in which research and practical experience is weak, limited, contradictory or inconclusive will be identified, along with areas in which further research is required in order to assess the impact of such programs. Expected results also include the dissemination of the current state-of-the-art to audiences of state and local government health officials and representatives from the private health care sector in states which do and do not operate hospital rate control programs.

RECORD NO. 233803002 CATEGORY: DISSEMINATION - DISSEMINATION

TITLE: Dissemination of Information Regarding Health Services Research to Non-Researchers

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
05-01-80	10-31-82	489,723	489,723	806,649	LEWIN, LAWRENCE S LEWIN AND ASSOCIATES, INC 470 L'ENFANT PLAZA, S.W. WASHINGTON DISTRICT OF COLUMBIA 20024

OBJECTIVE:
To disseminate information on the concepts, principles, and methods of health services research to non-researchers from state and local government and the provider community through the planning and conduct of workshops.

APPROACH:
Approach involves the planning and development of workshops designed to: introduce non-researchers to the concepts, methods, purposes, achievements, and limitations of health services research; demonstrate the application of health services research methods and findings to the policy issues and operational problems faced by state and local government officials and the provider community in their work; and address the difficulties of applying research methods and findings to problems of policy and administration in public agencies and state and local health institutions.

FINDINGS:
Expected results of the contract include the development and conduct of a series of workshops for state and local government officials and health care providers to accomplish the above-noted objectives.

RECORD NO. HS01833 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Analysis and Therapy of Life-Threatening Emergencies

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-30-76	12-31-81	195,277	708,764	708,764	SHOEMAKER, WILLIAM C LOS ANGELES COUNTY HARBOR-UCLA MED CTR 1000 W CARSON ST TORRANCE CALIFORNIA 90509

OBJECTIVE:
To continue the development and evaluation of a set of protocols to manage severe medical emergencies, and to test the protocols through controlled clinical trials.

APPROACH:
The investigators have designed a general algorithm to be used with patients who arrive at an Emergency Department with potentially life-threatening problems. They are testing the algorithm in one of three emergency services, the other two serving as comparison groups, and are examining differences in mortality, resuscitation time, admission and number of days in the Intensive Care Unit, need for ventilatory support, number of secondary operations and of complications, febrile days, and time in hospital. Further studies include formulation and testing of an algorithm for Intensive Care Units, and completion of the clinical trials in an operational setting, as well as refinement and validation of a Predictive Index to estimate survival probabilities.

FINDINGS:
Patients treated in accordance with the Emergency Department protocol are resuscitated more promptly than those managed by conventional means. The algorithm has gained enthusiastic acceptance from physicians at the research site, and has provoked widespread interest in other hospitals. The systematic development and validation of clear and precise methods for diagnosing and managing critical medical emergencies is a central activity in emergency medical services research, not only because of the significant improvements which effective algorithms can provide in clinical care but also for their value as tools for education, evaluation, and cost analysis.

RECORD NO. HS02068 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Myocardial Infarction Prediction in Emergency Rooms

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-30-76	12-31-81	329,145	1,725,983	1,725,983	D'AGOSTINO, RALPH B BOSTON CITY HOSPITAL 818 HARRISON AVENUE BOSTON MASSACHUSETTS 02118

OBJECTIVE:
To test the validity, reliability and utility of a mathematical model to predict acute ischemic heart disease in individual patients in six hospitals throughout New England in an effort to reduce inappropriate admissions to Coronary Care Units.

APPROACH:
The six hospitals, though randomly selected, represent major academic, teaching affiliates, and non-teaching institutions which care for all socio-economic groups. During the prospective phase of the study, the predictive function will be given to ER physicians to supplement their diagnostic and admission decisions. For one hospital group, the ER physicians will use the model on every eligible patient during the first six months of the study and have it withheld the last six months. For the second hospital group, the model will be given to the ER physician during the alternate months. The predictive function is based on the physician's present intuitive approach involving the weighting of all relevant variables in reaching a diagnosis. This additional diagnostic tool is intended to improve Coronary Care unit admitting practices. Generalizability will be demonstrated at six hospitals with varying characteristics, divergent physician practices, and different population characteristics.

FINDINGS:
Findings from the Boston City Hospital ER indicate that the use of the tool improved diagnostic accuracy by 12% and reduced the false positive CCU admission rate by 40%. Every patient admitted to a General medical ward rather than a CCU bed resulted in a gross savings of $293 per patient day which could be attributed to the use of this predictive instrument. The difference in per diem costs between CCUs and acute care beds are substantial. Even a modest improvement in diagnostic accuracy would yield large cost savings in addition to savings in both physical and psychological side effects suffered by patients. If there are differences between the ER performance when the model is available in the ER versus when it is not, analysis of the prospective study data should detect these differences with a very high probability.

RECORD NO. HS02149 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Validation of Quality Assessment Measures in EMS

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-01-76	04-30-82	201,569	892,945	1,084,661	FRAZIER, WILLIAM H YALE UNIVERSITY 155 WHITNEY AVENUE NEW HAVEN CONNECTICUT 06520

OBJECTIVE:
To develop and test a system of quality appraisal for care in the Emergency Department (ED).

APPROACH:
This project will produce a set of clinical algorithms, for soft-tissue lacerations, burns, upper- and lower-extremity injuries, and soft-tissue infections. The algorithms are backed by a system of feedback to physicians of information on their deviations from the algorithms. An experimental test of one algorithm has shown substantial impact on performance of house staff. The four additional algorithms will be subjected to similar tests, and varying feedback intervals will also be tested to determine the most efficient. The result will be a system capable of improving quality of care for 30 percent of ED patients (80 percent of surgical ED patients).

FINDINGS:
The soft-tissue laceration algorithm with feedback to physicians within 48 hours, of information on deviations, produced significant and large improvements in quality of care as compared with randomly assigned controls with the algorithms but no feedback. When feedback was discontinued, degradation in performance was relatively slight, indicating a learning effect.

RECORD NO. HS02467 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Assessing Emergency Systems Quality: Method Development

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
06-30-76	12-31-81	235,431	739,603	969,995

INVESTIGATOR NAME AND ADDRESS

GREENFIELD, SHELDON
UNIVERSITY OF CALIFORNIA LOS ANGELES
405 HILGARD AVE
LOS ANGELES
CALIFORNIA 90024

OBJECTIVE:
To demonstrate the generalizability of the "criteria mapping" approach to quality of care assessment for two common complaints presenting to the emergency room, chest pain and abdominal pain; and to develop this method into an exportable package which can be used in any emergency department to identify charts for physician audit which are likely to indicate deficiencies in quality of care.

APPROACH:
A criteria map is a method for abstracting and interpreting information in the medical record on presenting complaints and associated findings to arrive at subgroups of patients with similar characteristics. In this application, it calculates the level of risk of serious disease warranting hospital admission. This research entails testing the generalizability of a chest pain criteria map, developed and tested in two hospitals, to a third hospital with a different physician and patient population; determining health outcomes of patients to assess the validity of the method in this new setting; assessing the ease of abstraction by the hospital's own abstractors; comparing the efficiency of physician review of quality with and without the map score as a screen; developing and testing a criteria map for abdominal pain; and developing a package, including a computerized scoring system, for dissemination of the method to any emergency department.

FINDINGS:
Statistical analysis of the chest pain criteria map has resulted in modifications of the map and the scoring system to increase its validity and efficiency and its simplicity. The criteria map score has been shown to be a strong predictor of the patient outcome of admissible disease. The map performs less well in discriminating among admitted patients with and without admissible disease than it does among discharged patients. However, outcome indicators for admitted patients have been revised from discharge diagnosis to procedural information and this has improved the correlation of outcome with map scores. Use of the chest pain criteria map has been replicated at a community hospital with a different patient and physician population than the two hospitals in which the map was developed. Preliminary results confirm previous findings. The relationship of process to outcome is stronger than it was in the initial two hospitals, for admitted patients, but somewhat less striking for discharged patients. This research has also shown that quality scores based on criteria lists are negatively correlated with outcomes for chest pain in the emergency room setting.

RECORD NO. HS02559 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Quantitation of Injury and Critical Illness

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-30-76	12-31-80	49,826	590,933	590,933	CHAMPION, HOWARD R WASHINGTON HOSPITAL CENTER 110 IRVING ST NW WASHINGTON DISTRICT OF COLUMBIA 20010

OBJECTIVE:
To describe the severity of a patient's injury in quantitative terms as a function of various anatomical and pathophysiological state and to correlate estimated severity with outcome.

APPROACH:
Injury as a disease comprises a wide spectrum, from very minor to instantaneously lethal. This research refines earlier efforts toward establishing a numerical index of severity of injury that correlates with patient status and outcome. Three indices that are independently and collectively predictive of patient status will be tested and refined.

FINDINGS:
Trauma is the major cause of death up to age 37, and is a major cost factor in delivering emergency health care. Accurate quantitative means of judging a trauma patient's status and guiding care could both help improve emergency care decision making and serve as a basis for better evaluation of services.

RECORD NO. HS02567 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Complications in Prehospital Cardiac Resuscitation

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-77	11-30-80	0	558,215	558,215	NAGEL, EUGENE L JOHNS HOPKINS UNIVERSITY CHARLES AND 34TH STS BALTIMORE MARYLAND 21218

OBJECTIVE:
This study will attempt to identify complications of prehospital administration of cardiopulmonary resuscitation (CPR) and observe associated factors.

APPROACH:
With the cooperation of the Miami EMS system and medical examiner, out-of-hospital incidents of CPR administration are identified. Medical examination of nonsurvivors, and hospital records and interviews of survivors are used to identify adverse consequences of the intervention and characteristics of the victim (e.g., age, body weight). Ambulance records and rescuer interviews will be used to determine relevant circumstances of the incident and characteristics of the rescuer.

FINDINGS:
Preliminary results suggest high frequencies of fractured ribs and aspiration pneumonitis. Indications will be sought for improvements in the technique or the training of rescuers in its use.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS03058 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Health Status of Survivors from Cardiac Arrest

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-78	03-31-82	85,137	259,787	259,787

INVESTIGATOR NAME AND ADDRESS

BERGNER, LAWRENCE
SEATTLE-KING COUNTY HEALTH DEPARTMENT
612 3RD AVE
SEATTLE
WASHINGTON 98104

OBJECTIVE:
To determine the health status-physical and psychosocial- of survivors of out-of-hospital cardiac arrest using the Sickness Impact Profile (SIP) and other measures of dysfunction.

APPROACH:
Survivors of cardiac arrest in Seattle and King County are interviewed six months after discharge to determine their health status. Their SIP scores are compared with those of a group of normal patients and with a group of myocardial infarct patients who did not suffer an arrest. Comparisons within groups are also made to identify factors in treatment which may affect health status.

FINDINGS:
Pilot work suggested differences in health status following cardiac arrest depending upon whether prehospital care is given by basic technicians or by paramedics, whether resuscitation is begun immediately or is delayed, and the duration of cardiopulmonary resuscitation prior to the provision of definitive care. Preliminary findings from the current study suggest that cardiac arrest patients who survive for six months after discharge recover to reasonably high levels of health, though not as high as myocardial infarction patients who did not suffer an arrest. Further analysis will address the effect of type of treatment and time factors. The information will contribute to understanding the long-term cost-effectiveness of sophisticated prehospital cardiac care.

RECORD NO. HS03090 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Emergency Medical Systems Severity Index Research

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-01-79	04-30-82	104,320	218,597	378,477	KRISCHER, JEFFREY P UNIVERSITY OF FLORIDA GAINESVILLE FLORIDA 32611

OBJECTIVE:
To develop analytic methodologies for the construction of severity indices consistent with clinical judgements.

APPROACH:
Decision theory, utility theory, and modeling of clinician's judgement will be used to construct indices of the severity of burns and trauma and of the need for care. The development of the indices includes: defining attributes to be included in each index; testing the assumptions of the independence of attributes; assessing the relative weights of the attributes; assessing severity functions of each attribute; and modeling by combining the importance of each attribute and severity function into a single index. These indices will then be tested using the Florida Trauma Registry.

FINDINGS:
The expected findings are methodological advances in index construction along with two or three indices of severity relating to trauma, burns, and immediacy of care. Such work is pertinent to legislation and evaluation of Emergency Medical Services and should be useful in evaluating the adequacy, timeliness, and impact of medical services.

RECORD NO. HS03215 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Treating Cardiac Arrests with Defibrillation by EMT's

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
04-01-78	03-31-81	28,065	200,205	200,205	BERGNER, LAWRENCE SEATTLE-KING COUNTY HEALTH DEPARTMENT 612 3RD AVE SEATTLE WASHINGTON 98104

OBJECTIVE:
To determine the effectiveness of prompt defibrillation, performed by Emergency Medical Technicians (EMTs), in improving survival rates for out-of-hospital cardiac arrest patients.

APPROACH:
This project takes advantage of a natural experiment in King County, Washington, where an Advanced Life Support system is being introduced in phases. A comparison will be possible of the experience of areas served by EMTs, by EMTs trained and certified in the use of defibrillators (EMT/DC), and by paramedics (EMTs extensively trained in advanced cardiac techniques such as intubation and medications, as well as defibrillation). A surveillance system has been established to identify all out-of-hospital cardiac arrest patients who receive emergency care and the outcome (death, hospital admission, long-term survival) is determined for each patient. The effectiveness of EMT/DC services is compared with the results of basic EMT service, and with paramedic results. The value of a tiered system in which EMT/DCs supplement paramedic services is also being examined.

FINDINGS:
Preliminary findings suggest that, as compared to conventional EMTs, EMT/DC services double the rate of survival to hospital discharge for cases of cardiac arrest due to primary heart disease; this comes close to the rates achieved by paramedics. If these results are borne out, it will be possible to recommend EMT-performed defibrillation as an alternative or a supplement to the much more costly paramedic program for improving prehospital cardiac care. This system design would particularly aid rural and remote EMS systems containing communities with low population densities and limited budgets.

RECORD NO. HS03237 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Measuring the Quality of Survival in Burn Patients

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-01-79	09-30-80	0	43,823	43,823	MUNSTER, ANDREW M BALTIMORE CITY HOSPITALS 4940 EASTERN AVE BALTIMORE MARYLAND 21224

OBJECTIVE:
To develop a reliable and valid burn outcome scale to measure the quality of life in surviving burn patients. This burn outcome scale may be used to compare patient outcomes in different burn centers; as a prognostic indicator for clinical purposes; and to compare burn centers with general hospital facilities. This information will be invaluable for planning a national strategy of burn care and supporting the development of Regional Burn Centers as mandated by Federal legislative action in 1976.

APPROACH:
Items were first developed and weighted using burn-relevant questions from existing scales, and adding burn-specific questions gathered through local patients and a consultant group. After the scale was developed, a small group of patients (about 30) discharged 1 to 3 months previously, was monitored to yield information about logistics, patient fatigue and distress, time involved, etc. This information was interpreted as pilot data for a subsequent major longitudinal effort.

FINDINGS:
Present understanding of burn outcomes is limited almost exclusively to mortality although evidence suggests that the value of specialized burn care may be more evident in differences among survivors of burns, such as more complete restoration of joint function, improved appearance, better social adjustment, etc. Further investigation, as specified above for a longitudinal study, is required.

RECORD NO. HS03239 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Quality of Care in Acute Myocardial Infarction

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-01-79	01-31-82	104,919	226,580	275,466	TUGWELL, PETER MC MASTER UNIVERSITY HAMILTON CANADA

OBJECTIVE:
To develop methods and a strategy for validating the medical care process in myocardial infarction against both clinical and functional health outcomes.

APPROACH:
This study is designed as a prospective analytic survey, in which patients with acute myocardial infarction (rigorously defined) are to be followed during the course of their hospitalization and for six months following discharge. Measurement instruments have been developed and a pretest of 44 patients has been conducted, and initial analyses performed. Plans for entering control variables into the analysis are to be developed and further specific analyses are to be performed on the pretest. Approximately 200 patients admitted consecutively to intensive care units of three community hospitals will then be studied, utilizing a nurse observer for recording components of the process of their care. Process data will then be compared with clinical and functional outcomes of the patients.

FINDINGS:
This research is expected to identify the processes of cardiac care which are sufficiently associated with clinical outcomes to warrant controlled clinical trials in later studies. In addition, measurement tools for gathering valid data on care process are being developed. These will improve our ability to measure the effect of the EMS system upon ultimate survival and degree of recovery.

RECORD NO. HS03261 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Burn Care Facility Study

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
04-01-79	12-31-81	302,047	682,362	752,587	PAYNE, BEVERLY C UNIVERSITY OF MICHIGAN ANN ARBOR MICHIGAN 48109

OBJECTIVE:
To develop methods to determine the cost effectiveness of special care facilities for burn patients.

APPROACH:
Measures of patient characteristics, architectural and organizational factors, quality of care, and costs of treatment are being tested for subsequent incorporation in a full-scale examination of patient care in different critical-care units, and in comparisons between specialized facilities and general hospital wards. The initial project is studying approximately 1,000 patients in ten hospitals, three with specialized burn care facilities, four with dedicated beds, and three with general care beds. Instruments are being developed to collect data on five major types of variables: 1) patient outcomes; 2) patient prognostic indicators; 3) treatment variables; 4) organizational variables; and 5) costs. Data will be used in methodologic analyses and preliminary explorations of hypothesized relationships, to permit the development of a design for a definitive study.

FINDINGS:
The costs of care in specialized facilities are considerably greater than in general hospital beds. There is an immediate need to determine which of the factors associated with these higher costs, if any, are associated with improved patient care before a planned program to establish burn care centers is undertaken. The study will develop methods for a larger study and determine the amount of outcome variation that may be related to institutional factors, in order to determine the desirability of such a study. It is also important to establish that the variance in outcome between institutions is not entirely explainable by patient factors such as severity of the burn.

RECORD NO. HS03606 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Reliability and Validity Testing of the AIS and ISS

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-30-81	80,929	205,181	205,181	SHAPIRO, SAM JOHNS HOPKINS UNIVERSITY CHARLES AND 34TH STS BALTIMORE MARYLAND 21218

OBJECTIVE:
To test the reliability and validity of scales which are being used to classify severity of injury for trauma patients.

APPROACH:
The Abbreviated Injury Scale (AIS) and the Injury Severity Scale (ISS) are two of the methods used in classifying the severity of the injuries to patients. They have been used to permit comparisons of different methods of treatment, different facilities, and different systems of care. This study will determine the reliability of scores calculated by physicians, nurses, and medical technicians. It will explore differences when scores are calculated from Emergency Department forms, hospital charts, or discharge diagnoses, and when records from different hospitals are used. It will also assess whether scores calculated for non-vehicular injuries are as reliable as for vehicular injuries. Agreement between scores and other methods of assessing severity (probability of survival, length of hospital stay, number of operations, and subjective judgements of clinical experts) will also be determined.

FINDINGS:
To compare and evaluate the effectiveness of Emergency Medical Services Systems and components in improving the care of injured patients, it is essential that adequate methods be provided to account for differences in the severity of the injury and the probability of dying. This study will estimate the limits of reliability of the two scales most commonly used for this purpose, and will therefor permit credible evaluations of these Federal activities in Emergency Medical Services which are intended to improve the care of trauma victims and the needs, if any, for continued effort.

RECORD NO. HS03785 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Bias in Comparing Outcomes of Burn Units

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	12-31-81	18,742	33,892	33,892

INVESTIGATOR NAME AND ADDRESS

BERRY, CHARLES C
UNIVERSITY OF CALIFORNIA SAN DIEGO

LA JOLLA
CALIFORNIA 92093

OBJECTIVE:
To assess the bias resulting from standard severity adjustment procedures used in evaluating the effectiveness of those treatments given in different burn units, and to develop less biased methods.

APPROACH:
A mathematical model of the process by which outcomes of burn units are generated will be constructed and used to determine the amount of bias in estimating outcome, assuming the model, and under reasonable ranges of model parameters. This will provide information which should allow for the development of new and less biased procedures for comparing outcomes of such units. It is anticipated that one such procedure will involve the development of the mathematics for correcting for unreliability in the predictors when survival is to be estimated using multiple logistic methods.

FINDINGS:
Data which were collected on the size of burns have been used to estimate the error in measuring burn severity. Mathematical models have been constructed to investigate the amount of bias which could be expected with such error using analysis of covariance to compare the effectiveness of different treatment procedures. Analyses using both logistic and probit functions found a bias of about 5% under a set of reasonable assumptions. This work is to be extended to include the bias from errors in measuring burn depth as well as size. Such improved insight into bias possibilities will likely guide the development under this grant of less biased adjustment procedures with potentially very major consequences. For example, Linn's conclusion of no difference in outcome for burn cases in hospitals may have been due to bias in the analysis methods used.

RECORD NO. HS03819 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Emergency Medical Services Effectiveness Research

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-15-79	09-14-82	507,769	926,671	1,432,284	GUSTAFSON, DAVID H UNIVERSITY OF WISCONSIN MADISON 500 LINCOLN DR MADISON WISCONSIN 53706

OBJECTIVE:
To measure and explain the effect of vertical categorization of hospitals (which is the classification of hospitals by level of clinical capability) on outcome for patients and on actual transfer practices in emergency care for cardiac and trauma cases. A key to the implementation of a categorized regional system is the negotiation of formal transfer agreements by means of which the more seriously ill and injured are sent to hospitals of greater capability.

APPROACH:
This study will employ hospital record abstracts of 15,000 cases from hospitals in three areas: 20 hospitals from Maine where categorization is regionally integrated in an advanced EMS system; 15 from the Green Bay, Wisconsin, area where categorization has recently been introduced; and 15 from the Madison, Wisconsin, area where no formal categorization exists. Severity indices, developed for trauma and ischemic heart disease by this Wisconsin group, will be used to stratify patients into comparable groups. The independent variables include the category of the hospital, the categorization system, severity of the patient, quality of care given in the emergency department, the specific hospital where care is rendered, elapsed time before care is given and aggressiveness of care for trauma patients. Outcome variables include mortality, length of stay, functional capacity of patients, transfer rates and delays in transfers. Multivariate analyses will determine the effects the independent variables have on these outcomes.

FINDINGS:
This study addressed an important issue: categorization and transfer agreements. These two features have been the cornerstone of the government's EMS program and must be implemented as a prerequisite for obtaining Federal support for advanced life support systems. To date there has been no rigorous, scientific investigation of the value and effectiveness of them. This project is addressing such an evaluation.

RECORD NO. HS03826 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Impact of EMS System Development in Rural Areas

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	09-29-83	476,485	777,538	1,454,187

INVESTIGATOR NAME AND ADDRESS

STOKES, JOSEPH III
BOSTON HEALTH AND HOSPITALS DEPARTMENT
818 HARRISON AVE
BOSTON
MASSACHUSETTS 02118

OBJECTIVE:
To measure the effectiveness of incremental improvements in rural EMS systems in terms of reduction in death and disability from heart disease.

APPROACH:
The utilization, treatment and results of emergency care in three rural EMS systems differing in their level of sophistication will be compared. A Basic Life Support system in western Massachusetts, a system in West Virginia in transition to paramedic-staffed Advanced Life Support, and a fully-implemented Advanced Life Support system in Cape Cod, Massachusetts, will be examined at three points in time. Analyses will include the accuracy of diagnosis, appropriateness of treatment, and results of care for patients with cardiac emergencies.

FINDINGS:
Procedures for collecting complete and accurate data from each research setting are operating, and full cooperation has been gained from ambulance systems, hospitals, and health departments. Data collection is proceeding well and preliminary analyses have demonstrated that an adequate number of cases will be available for study. This project is obtaining information about the care of heart attack victims in rural areas, the effectiveness of regional EMS systems in improving cardiac care, and the extent to which each of the elements comprising the system contributes to lowering mortality. Because rural areas are characterized by longer response times, fewer calls per technician (and therefore less field experience), and higher costs per run, it is important to understand the extent to which the mandates of the Federal EMS program, designed primarily for high population density areas, can be expected to improve cardiac care in rural settings.

RECORD NO. HS03832 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Regional Emergency Service for Low Weight Newborn

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
03-01-80	05-31-82	145,031	145,031	310,164	FERRARA, ANGELO C HEALTH POLICY ANALYSIS & ACNTBLTY NETWK P.O. BOX 527 EDGEWOOD NEW MEXICO 87015

OBJECTIVE:
To evaluate the effect of the neonatal transportation of infants weighing less than 2500 grams at birth on neonatal mortality.

APPROACH:
The approach will be a comparison of two groups of infants followed from birth to death or discharge from the hospital. The study group will consist of infants transported from Level I or II facilities to a Level III facility; the control groups will be non-transported infants in Level I and II facilities matched by birthweight, gestational age, medical condition, and type of hospital at birth. Charts of newborns weighing less than 2500 grams at birth will be audited at all New York City hospitals. Variable severity will be estimated using modifications of the Lubchenko index and six hour respiratory distress scores. During the first year of the project a feasibility study will be conducted to determine data availability and success in the quantity and quality of the matching process, and the proposed analysis plan will be refined. Analysis of variance and regression using both categorical and continuous variables will be conducted.

FINDINGS:
While there is evidence that infant mortality is lower in Class III hospitals than in Class I and II hospitals, it is not known if transporting neonates to a Class III hospital improves their chances of survival. There is currently no objective evidence upon which a physician can make a decision whether or not to transfer specific categories of infants. Despite this lack of evidence as to clinical efficacy, the numbers of infants transported to referral centers is increasing as are the already high costs. It is expected that non-neonates will have a significantly higher mean mortality rate. Additionally it is expected that time of pick-up temperature will effect mortality rate.

RECORD NO. HS03961 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Evaluation of a Drug Formulary and Pharmacy at an HMO

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	06-30-82	23,707	50,699	50,699	BUSH, PATRICIA J GEORGETOWN UNIVERSITY 37TH AND O STS NW WASHINGTON DISTRICT OF COLUMBIA 20057

OBJECTIVE:
To compare the quality and economy of prescribing practices in two pairs of pharmacies in four HMO centers; all four HMO centers will install a drug formulary, but only two centers will start in-house pharmacies.

APPROACH:
Prescriptions and patient medical records will be reviewed for the six months prior to implementation of the formulary to assess the appropriateness of prescribing against criteria. Data on prescribing will also be collected after implementation of the formulary and the pharmacy and compared with the earlier data to determine any changes. The project will also assess the acceptability of these two mechanisms to the prescribers at the HMO, as well as compare total start-up and operating costs under the formulary and in the pharmacies.

FINDINGS:
The study results will indicate (1) whether a drug formulary lowers the costs and raises the quality of prescribing, (2) whether installing a pharmacy is cost-effective compared to having formulary prescriptions filled at neighborhood pharmacies, and (3) the degree of acceptance of drug formularies and pharmacies by the prescribing staff in an HMO located in an academic medical center. The project takes advantage of a unique opportunity to evaluate a natural experiment in an area of concern to HMO administrators, prescribers, pharmacists and members.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS04029 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Factors Determining Outcome of Hospitalized Trauma

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	09-30-81	0	44,386	44,386

INVESTIGATOR NAME AND ADDRESS

LEVY, PAUL S
UNIVERSITY OF ILLINOIS MEDICAL CENTER
BOX 6998. 1737 W POLK ST
CHICAGO
ILLINOIS 60612

OBJECTIVE:
To improve the Estimated Survival Probability (ESP) Index (a technique for grading the severity of hospitalized trauma) and to study the relationship between hospitalized trauma outcomes (discharge status, interval between admission and death, length of hospital stay) and variables such as bedsize of hospital, race, sex and geographic location.

APPROACH:
The EPS index was developed using ICDA codes to predict the probability of surviving a trauma condition. The ESP Index will be improved by making it age-specific using data from a subset of the Hospital Discharge Survey (1971-73), a national survey of non-Federal short stay hospitals conducted by NCHS. Probabilities will be obtained separately for three age groups (0-44 years, 45-65 years, and 65+ years) and for frequently occurring ICDA codes. The ESP Index will than be retrospectively tested on the Illinois Trauma Study data set. Special attention will be paid to situations suggested by a literature review such as the impact which time, place, race and sex have on trauma outcome and that mortality increases with increasing hospital bed size even when adjusted for age and severity of injury. The sensitivity of the ESP to coding errors, and the assumption that outcomes from multiple trauma are simple multiplicative functions of single trauma will be specifically investigated.

FINDINGS:
Identification of factors affecting hospitalized trauma are of significance both in research concerning quality of care and in planning of emergency medical services. The index is not proposed for use in individual cases such as for a triage function.

RECORD NO. HS04146 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Behavioral Outcome in Head Injury

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-80	08-31-83	118,417	118,417	387,617	DIKMEN, SUREYYA S UNIVERSITY OF WASHINGTON SEATTLE WASHINGTON 98195

OBJECTIVE:
To determine the predictive utility of several severity indices, the neuropsychological and psychosocial consequences of head injuries and the recovery of function in these areas in relation to the long-term behavioral outcome for head trauma. The feasibility of identifying a short battery of measures sensitive to behavioral sequellae will also be measured and tested.

APPROACH:
Sixty-eight adults with head trauma of varying severity will be followed in a longitudinal study of one year. They will be compared with 68 normal controls matched by age, sex, race and education. The severity of injury will be evaluated at fixed time points during the first year after trauma for levels of impaired consciousness, specific neurological signs and various cognitive functions. Both groups will be subject to an expensive battery of neuropsychological and daily activities measures administered at determined points during the first year post-injury. The study design will permit determination of outcome, neuropsychological and daily activities impairment, recovery potential in these domains and develop a single predictive measure of outcome for head trauma patients. Based on available data on head injured patients, the feasibility of developing a short battery of measures sensitive to the major categories of neuropsychological and psychosocial deficits will be empirically examined and cross validated by means of data from the present study.

FINDINGS:
Medical advances in recent years have increased the chances of survival for patients with head injuries. Increases in morbidity have in consequence made additional demands for rehabilitative services which attempt to restore these patients to better levels of functional ability. Measures of these functions are at present limited, cumbersome and imperfect. Findings from this grant should make a significant contribution to both the precision and ease of measurement which should be valuable not only in measuring behavioral outcomes but as a predictive measure of the value and kinds of rehabilitative services that are most suitable for patients with head trauma. A modification of the Sickness Impact Profile (SIP), suited for head trauma patients, is an anticipated consequence of this research activity.

RECORD NO. HS04160 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Development of Paramedic Evaluation Components

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-80	08-31-81	40,247	40,247	40,247

INVESTIGATOR NAME AND ADDRESS

CHOI, THOMAS
UNIVERSITY OF MINNESOTA OF MNPLS-ST PAUL

MINNEAPOLIS
MINNESOTA 55455

OBJECTIVE:
To develop and validate indices of patient health status/outcome for eventual use in measurement of paramedic performance.

APPROACH:
Severity, stability, criticality and prognostic indices comprising a prehospital criticality index will be designed to measure the effectiveness of paramedic care for non-traumatic chest pain patients. The indices will be developed by a five member physician panel having cardiology and emergency medicine training. Congruent and predictive validation will be estimated for the severity, stability and criticality indices which are hypothesized to correlate with intensity of care provided by trained clinicians. Intensity-of-care data, which will serve as predictive criteria, will be collected by paramedics (confirmed by observers) in four different EMS systems over a six-to eight-month period. Data will be collected for an estimated 200 to 400 chest-pain patients of varying severity. It should be noted that an estimate of the validity of the composite performance measures will not be conducted, nor will an evaluation of the paramedic performance be made.

FINDINGS:
The development of a prehospital criticality index which uses outcome rather than process measures can be used to assess the quality of paramedic performance and establish standards of performance. This can impact on training, utilization of personnel and cost. Immediate cost savings might be realized through the identification of the threshold of training hours beyond which only marginal benefits will be achieved. Additional implications may involve the relative cost-effectiveness of basic EMTs, basic EMTs with special defibrillation training, and paramedics. A prehospital criticality index may also serve as a prehospital triage index if it describes the level of patient problem so that a more appropriate level of in-hospital provider response may be planned.

RECORD NO. HS04164 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: Clinical Outcomes in EMS Systems Feasibility Study

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
08-01-80	06-30-81	51,800	51,800	51,800	SHUMAN, LARRY J UNIVERSITY OF PITTSBURGH 4200 5TH AVE PITTSBURGH PENNSYLVANIA 15260

OBJECTIVE:
To conduct a pilot study to determine the feasibility of comparing the effectiveness of emergency medical care delivered in fully developed Emergency Medical Services systems with systems which are not yet complete.

APPROACH:
This is the first step in an effort to design a credible study of various Emergency Medical Services (EMS) systems to determine the extent to which organized systems improve patient care. EMS systems throughout the country are at different stages of development, and there are differences in the ways in which various communities establish, operate, and evaluate their systems. This project will produce reliable criteria or indicators for classifying the stages of development of EMS systems so that equivalent sites can be selected for comparison, and will also determine the availability of patient and operational data in systems at different stages to permit comparisons of clinical effectiveness. The study is a descriptive effort with an emphasis on assessing the feasibility of techniques and procedures for systematic data collection, including field studies in two sites.

FINDINGS:
Results of this pilot effort will be used to determine whether EMS systems can yet be described and evaluated with enough rigor to support properly designed comparisons of their clinical effectiveness.

RECORD NO. HS04356 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - EVALUATION

TITLE: The Effectiveness of Mobile Intensive Care

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-80	09-29-82	24,771	24,771	51,887	WAGNER, GALEN S DUKE UNIVERSITY P.O. BOX 3327 DURHAM NORTH CAROLINA 27706

OBJECTIVE:
To replicate the King County, Washington, studies of effectiveness in prehospital cardiac care of Advanced Life Support (ALS) services.

APPROACH:
This is a prospective study which began several years ago when planning began for Advanced Life Support (ALS) services in Durham County, North Carolina. Baseline data have been collected on about a thousand patients over a 16-month period, detailing characteristics of the patient and the care process until discharge or death. Following institution of ALS, data collection will continue for the two-year period of the grant, and outcomes before and after ALS became available will be compared.

FINDINGS:
This study uses methods similar to those of the King County study of the effect of ALS upon mortality from cardiac arrest, but is dealing with additional types of cardiac arrhythmias and longer system-response time. It will also observe the in-hospital course of the patient in detail. Pilot data suggest that with the relatively long response times, institution of ALS will make little difference in cardiac mortality. This will be important information for rural communities, and tends to support the generalizability of the King County studies.

RECORD NO. HS03555 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - SYSTEMS INNOVATIONS

TITLE: The Effect of Telemetry on Advanced Life Support Care

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-82	201,423	370,934	508,836	CAYTEN, C GENE UNIVERSITY OF PENNSYLVANIA 3609 LOCUST WALK/C9, RM. 302 PHILADELPHIA PENNSYLVANIA 19174

OBJECTIVE:
To examine the extent to which telemetry (radio transmission of electrocardiographic signals) improves the chances that a victim of cardiac arrest will survive.

APPROACH:
Philadelphia is an urban community which presently responds to heart attack emergencies with trained personnel equipped with medications and electrical devices to restore heartbeat. The investigators will determine the value of augmenting the present system with procedures which permit a physician to diagnose a transmitted electrocardiogram and monitor resuscitation during transport to a hospital. After rescue personnel have been tested for their ability to recognize abnormal cardiac rhythms, half of the teams (selected randomly) will transmit electrocardiograms as part of their resuscitation procedures and the other half will continue present procedures. Survival rates of patients treated by each group will be compared.

FINDINGS:
Federal policy requires that an Emergency Medical Services system which provides Advanced Life Support must employ telemetry to insure medical control of the steps in cardiac resuscitation. Telemetry is an expensive element, however, and a number of well-established and very effective systems which employ highly trained rescue personnel no longer use their telemetry equipment. If valid information can be produced to show that training really does substitute adequately for telemetry, the findings would be of great importance to Federal policy. Many communities which are unable to afford the equipment and maintenance costs of telemetry would then be better able to establish Advanced Life Support procedures, a result of particular importance in rural and remote areas where the costs per citizen of installing and maintaining sophisticated communications devices is a major concern to system planners.

RECORD NO. HS03722 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - SYSTEMS INNOVATIONS

TITLE: Locational Analysis of Multi-level EMS Systems

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
08-01-79	09-30-80	0	26,682	26,682	STORBECK, JAMES E UNIVERSITY OF TEXAS AUSTIN AUSTIN TEXAS 78712

OBJECTIVE:
To develop and demonstrate programming methods and planning techniques for solving problems of siting three types of EMS facilities characterized by differing levels of life support capabilities.

APPROACH:
A three-tiered hierarchical EMS system is described as "first response", "basic life support," and "advanced life support" capabilities. Based on this system the linear programming problem is to insure that a maximum number of persons is served by each of the three tiers, using available numbers of units (e.g., ambulances, stations) within acceptable response time standards, and assuring that back-up coordination exists between the tiers. The methodology will be demonstrated using population densities, numbers of facilities, response time standards, travel distances, and frequency of emergency services requests in the Austin, Texas area.

FINDINGS:
The methods and techniques will have general significance for planning the siting and facilities in multi-tiered service delivery systems and special importance for EMS systems. Specific benefits for Austin, Texas are likely to emerge as well.

RECORD NO. HS03896 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - SYSTEMS INNOVATIONS

TITLE: Improving Drug Prescribing in Family Practice

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	09-29-82	95,451	182,872	241,069

INVESTIGATOR NAME AND ADDRESS

GEHLBACH, STEPHEN H
DUKE UNIVERSITY

DURHAM
NORTH CAROLINA 27706

OBJECTIVE:
To evaluate the efficacy of an "active," personal intervention strategy, providing computer generated feedback, in changing prescribing practices of primary health care providers. Implications of improved prescribing behavior are reduced health care costs and diminished risks of adverse effects.

APPROACH:
Physician prescribing behavior will be tracked with 25 commonly prescribed medications available as both generic and brand-name preparations, with substantial price differences; and with 25 commonly prescribed drugs for which structurally different therapeutic alternatives are available that provide advantages such as reduced toxicity, less frequent dosing, or lower cost. Feedback is provided monthly to physicians in the experimental group, listing drugs prescribed, their frequency of prescription and the suggested alternative generic forms together with dollar savings and/or therapeutic advantages. Drug feedback is provided for subsets of 50 tracer drugs to assess whether changes in the prescribing of generic equivalents are confined to the specific drugs for which providers are given information or whether the improved habits generalize to drugs not on the generic tracer list; 3,500 prescriptions will be evaluated in the 2 family practice clinics every 6 months over a 30 month period.

FINDINGS:
In January 1980, providers in the Family Medicine Center were grouped into strata based on level of experience and randomized into experimental and control groups. Twenty-two physicians were randomized to the experimental group and twenty-two to the control group. At the present time, four rounds of monthly feedback have been completed. A preliminary analysis of results was conducted after two months of feedback and can be seen in tables 1-4. A significant effect of the prescribing feedback is evident even at this early stage. Prescribers in the experimental group have increased their overall use of generics and showed marked changes for certain selected medications like sulfisoxazole and diphenhydramine. Among the therapeutic suggestions, there has been a significant decrease in the use of indomethacin. A small but insignificant trend is seen in improved dosage of penicillin for streptococcal pharyngitis. Although these data are still preliminary, the trend is encouraging. A description of the system and discussion of these preliminary results was given by Dr. Hammond at the World Association of Medical Informatics Conference in Versailles, France, May 1980.

RECORD NO. HS03953 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - SYSTEMS INNOVATIONS

TITLE: A Computer Audit to Improve ER Drug Prescribing

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-79	01-31-81	0	54,250	54,250	BRAND, DONALD A YALE UNIVERSITY NEW HAVEN CONNECTICUT 06520

OBJECTIVE:
To measure the effectiveness of a computer-assisted medical audit in improving drug prescribing practices in an emergency service setting. The randomized controlled study will also determine 1) if changes in prescriber behavior persist beyond the period of audit, and 2) the relative effectiveness of the audit as a function of the delay between a particular episode of patient care and the providers' receipt of the case audit report.

APPROACH:
The care of patients treated for soft tissue injuries in three hospital emergency departments, one of which will provide a randomized control group, will be concurrently reviewed during a one-year period. A computer-assisted audit comparing problem-specific medical records to be previously developed clinical algorithm will be conducted. Providers will receive daily case audit reports indicating instances of deviation and will be asked to give reasons for the deviations. The deviation rates will be used as the measure of the quality of drug prescribing and will be calculated before, during, and after the system has had a chance to influence physician behavior. Different feedback delays and hospital size, affiliations, and staffing patterns will be correlated with their respective deviation rates.

FINDINGS:
The system as proposed has clear cost containment features that are embedded in a general model of quality assurance, medical education and more rational drug prescribing practices. If proven successful the approach can be applied to other clinical areas, both surgical and non-surgical; and since the system can be accessed through ordinary telephone lines, it would be available to any institution desiring to monitor the care of its patients and provide continuing education to its physicians.

RECORD NO. HS04066 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - SYSTEMS INNOVATIONS

TITLE: Cost Effective Strategies in Ambulatory Care

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	06-30-81	0	224,144	228,215	KOMAROFF, ANTHONY L PETER BENT BRIGHAM HOSPITAL 721 HUNTINGTON AVE BOSTON MASSACHUSETTS 02115

OBJECTIVE:
To design cost-effective strategies for common clinical conditions based on decision analysis.

APPROACH:
Fifteen of the most common clinical problems seen in ambulatory care settings, for which a reasonable amount of probabilistic data exists, either in the medical literature or in various data bases, have been selected for study. Based upon common presenting symptoms of the selected conditions, alternative action options for diagnostic or therapeutic measures are identified. Decision "trees" which graphically represent the alternative action options and their outcomes are designed, and relevant probabilities associated with the branches, based upon the medical literature, available data bases, or expert opinion, are identified. Finally, "superior strategies", which factor in costs and conditional probabilities of clinical outcomes, will be calculated. Sequential test-ordering and therapeutic strategies which have the greatest cost-effective yield will be compared to typical current practice, as reflected in the National Ambulatory Medical Care Survey data.

FINDINGS:
Several decision trees have been developed and are being refined. Others have yet to be constructed. It is anticipated that the research will yield a set of explicit diagnostic and therapeutic strategies which will be useful to physician decision-making, as well as a series of prioritized research questions where gaps in information are encountered.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS02129 CATEGORY: EMERGENCY MEDICAL SERVICES & AMBULATORY CARE - MANPOWER TRAINING

TITLE: Socialization: EMS and Other Residency Programs

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-30-76	12-31-80	0	512,382	512,382	ANWAR, REBECCA A MEDICAL COLLEGE OF PENNSYLVANIA 3300 HENRY AVE PHILADELPHIA PENNSYLVANIA 19129

OBJECTIVE:
To describe and analyze the characteristics of physicians who enter and remain in training programs designed to produce staff who specialize in the delivery of emergency medical services (EMS).

APPROACH:
This study will involve an attempt to characterize the type of individuals who decide to enter emergency medical service residencies; a national survey to compare residents in this specialty with residents in surgery and internal medicine; a panel study to compare those who complete training programs with those who drop out; and recommendations regarding selection criteria and the structure of the training programs.

FINDINGS:
The data derived from the several phases of the study will be used to define the most promising applicants for specialty training in this field and preferred structure of the training program.

RECORD NO. HS03172 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - NEED AND UTILIZATION OF SERVICES

TITLE: A Comparative Study of Non-Scientific Medical Use

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
01-01-79	06-30-81	11,338	30,088	30,088	PESCOSOLIDO, BERNICE A YALE UNIVERSITY NEW HAVEN CONNECTICUT 06520

OBJECTIVE:
This study examines systems of medicine available in society, tracing the development of medical traditions, exploring factors in individual choice, and locating medical care system in relation to sociocultural, economic, political and historical contacts.

APPROACH:
The study defines health and illness and relates these issues to individual, national, and worldwide concerns through the examination of surveys from over 30 countries. It additionally addresses the wide variety of coping styles used past and present, to manage illness and focuses on medical systems including Western medicine and various forms of medicine used in other countries. The study proposes a general model to explain why holistic help (e.g. chiropractic) is sought instead of or in addition to mechanistic (e.g. modern scientific medical care). Data from Bolivia, Canada, Columbia, India, the Ivory Coast, Jamaica, Mexico, Morocco, Sierra Leone, Taiwan, Tunisia, West Malaysia, Upper Volta, and the United States are brought to bear on the hypotheses via logit regression techniques. Referral networks (both lay and professional) are examined using block modeling and discriminate techniques.

FINDINGS:
While the network and social value analyses are at too early a stage to determine substantive results, decision-making analyses have been conducted in Tunisia, West Malaysia, Taiwan, and Canada. Some tentative findings from this study indicate that preferences and choices are different phenomenon and must be carefully distinguished. Additionally, the relationship between migration and use is a complex one and differs for in-migrants and out-migrants. Additionally, availability, sex and education, are at this point the most consistent factors effecting choice of healer and outcome is not significantly related to type of treatment (scientific vs. non-scientific). These results are preliminary and with more refined analyses and the addition of findings from other countries may provide, indeed, a different overall picture.

RECORD NO. HS04145 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - NEED AND UTILIZATION OF SERVICES

TITLE: Priorities For Research In MCH Services: A Literature Review

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-18-80	11-30-80	36,388	36,388	36,388	SILVER, GEORGE A YALE UNIVERSITY 60 COLLEGE STREET NEW HAVEN CONNECTICUT 06520

OBJECTIVE:
To review and synthesize extant research literature about maternal and child health care services delivery and to derive researchable questions in this area.

APPROACH:
Existing health services research literature will be identified, reviewed, and synthesized. Emphasis will be placed on information concerning the needs of U.S. mothers and children for health and medical services; on the differential utilization of such services by race, socio-economic status, and geographic area; and on manpower requirements for provision for the services. Studies will be evaluated for scope, focus and methodology so that an analysis of issues raised in the literature, assessments of program effectiveness, and other aspects of the studies can be synthesized. An agenda of researchable questions which are currently unanswered and which relate to methodological or substantive gaps in the literature will be derived from the review and synthesis.

FINDINGS:
The review and synthesis of research literature in maternal and child health services revealed the persistence of unmet health needs of mothers and children, continuing disadvantages in health services of poor and minority children, and little attention to the policy background of these problems. A list of research topics reflecting both gaps in the literature and areas for follow up research was included in the synthesis. An annotated bibliography containing approximately twelve hundred references of journal articles, books, and newspapers was part of the final report. In addition, a bibliography of approximately three hundred articles which were not annotated was included in the report.

RECORD NO. HS03097 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - SUPPLY AND ACCESS TO SERVICES

TITLE: U.S. Health Care Delivery Policy and Distributive Justice

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-78	08-31-82	44,321	78,740	80,325	DANIELS, NORMAN TUFTS UNIVERSITY MEDFORD MASSACHUSETTS 02155

OBJECTIVE:
To apply the theory of distributive justice to the problem areas of the national health insurance policy; the distribution of physicians by specialty and geographically; resource allocation and health care for the elderly; preventive versus acute care; and regional health planning priorities.

APPROACH:
The study builds upon and extends a theory of distributive justice to practical issues facing health planners and particularly national health policies. Three theoretical problems addressed in the study are access to health care, resource allocation, and regulation of providers. A literature review in the field of philosophy pertaining to equality of access of services, priorities in macro-allocation decisions about health care resources, and conflicts of interest between health care providers and recipients is the basic source of data employed in the study.

FINDINGS:
This study will produce a systematic framework for analyzing health care issues; and to some extent clarify issues to prevent misconceptions and misuses of distributive justice, which is often used by health care researchers, policy makers and other interested groups.

RECORD NO. HS03125 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - SUPPLY AND ACCESS TO SERVICES

TITLE: Access to Services by the Black Urban Elderly

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-79	06-30-82	130,757	206,072	281,484	REED, WORNIE L WASHINGTON UNIVERSITY LINDELL AND SKINKER BLVD SAINT LOUIS MISSOURI 63130

OBJECTIVE:
The major objectives of the study are to determine elderly persons' needs for services, access to medical transportation, and selected social services. Particular attention will be given to barriers to services and factors enabling the use of services.

APPROACH:
The study observes the inner-city elderly population in St. Louis, Missouri. A sample of the non-institutionalized black population 60 years and over will be drawn on a census tract bases. A matching group of whites identified in the areas will be used as a comparison group; however, they will not be representative of the elderly white population of St. Louis. Interviews will be conducted of these populations using structured questionnaires.

FINDINGS:
In attempts to match needs to use and availability of services, the project intends to provide information to local health and city planners. An examination will be conducted on the interrelationship to various service programs. Comparisons will be made of differences between black and white populations on the need for, use of, and availability of services. Projections of service needs will be based upon analysis of the persons aged 60-64 years. A preliminary analysis based upon pretest-retest study reveals a statistical reliability for all but one condition on the symptoms check list, that consistency for reporting conditions in the two tests revealed that one-half of the condition reported in the pretest were not reported in the retest. The effect of socio-demographic characteristics indicates highest utilization for persons under 60, females, high school graduates, and whites, which conforms with patterns discerned in other studies (age, sex, education,and race differentials).

RECORD NO. HS04270 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - SUPPLY AND ACCESS TO SERVICES

TITLE: Navajo Ambulatory Care Utilization Patterns

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-01-80	12-31-81	27,183	27,183	29,937

INVESTIGATOR NAME AND ADDRESS

MUDGETT, CAROL
UNIVERSITY OF WISCONSIN MILWAUKEE
BOX 413
MILWAUKEE
WISCONSIN 53201

OBJECTIVE:
To determine the effects of accessibility and availability of ambulatory care services upon the utilization of these services and health status in a Navajo population. A second objective will be to relate those findings to the health planning process.

APPROACH:
Utilizing the Indian Health Service ambulatory patient care reports, the study will assess utilization patterns at seven IHS service units over a seven year period from 1972 thru 1978. The service units will array on a continuum from rural to more urban and distances to each facility will be measured to determine accessibility. Availability will be determined by travel time to a primary care site and its hours of operation. The analysis will focus on the relationships between these and utilization and health status as indicated by several tracer diseases. Trends found in a sample of cases will be cross-checked with aggregate ambulatory care and inpatient data for the years 1973, 1975, 1978. A second part of the study will attempt to relate the findings to planning for the delivery of ambulatory care.

FINDINGS:
This study will determine the effects of accessibility and availability of services upon utilization and the occurence of preventable disease in a Native American population. Additionally some insight might be provided relative to planning health delivery services in the area of health promotion and disease prevention.

RECORD NO. HS03664 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - PUBLIC PROGRAMS

TITLE: A Comparative Study of the Implementation of Child Health Policy

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-79	04-30-81	2,419	29,262	29,262	COBURN, ANDREW F BRANDEIS UNIVERSITY 415 SOUTH ST WALTHAM MASSACHUSETTS 02154

OBJECTIVE:
To examine how effectively the child health sections of the 1967 Amendments to Title V of the Social Security Act were implemented by the states, thereby determining the extent to which the intent of Federal legislation has been fulfilled.

APPROACH:
This will be a comparative case study focusing on four states and their experience in implementing the 1967 Child Health Amendments to Title V of the Social Security Act, with emphasis on two of the special projects implemented by the states-The Maternal & Infant Care and Child & Youth Projects. The study establishes a set of hypotheses containing ten political and administrative preconditions considered essential for effective implementation. Two pairs of states will be chosen based on these 10 preconditions-one pair exemplary of conforming to these preconditions in the implementation of the Programs of Projects after 1974; the other pair exemplary of states where conformity to these preconditions is weak. Data collected through existing documents, questionnaires, and site visits to each of the four study states will be analyzed to determine the association between the degree of conformity with the hypothesized preconditions and the effectiveness of implementation in each state.

FINDINGS:
One outcome of this study will be the development of specific policy recommendations for improvement in the implementation and administration of maternal and child health policy and programs under Title V. Also, this study will be useful in identifying factors contributing to the effectiveness of the states' efforts to implement the Programs of Projects, as well as identifying factors which serve to impede effective implementation in the states. A better understanding will be developed in the importance of implementation as a critical dimension of intergovernment relations and the grants-in-aid system, which will be useful in future considerations of National Health Insurance for mothers and children and specific grant programs for child health services.

RECORD NO. HS03720 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - PUBLIC PROGRAMS

TITLE: Impact of EPSDT on Health Services Utilization

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-01-79	12-31-80	0	19,616	19,616	SPIELBERG, LAUREL A JOHNS HOPKINS UNIVERSITY CHARLES AND 34TH STS BALTIMORE MARYLAND 21218

OBJECTIVE:
To describe the State of Maryland's Early and Periodic Screening Diagnosis and Treatment (EPSDT) program in terms of the population being served and prevalence of conditions being detected, and to assess the impact of this legislatively mandated screening program upon the utilization of health services by poor children.

APPROACH:
This study is to compare rates, types, and patterns of health services utilized and health services costs incurred by two groups of Medicaid children for the duration of one year. One group will have received preventive health screening during the first quarter of fiscal year 1977; a comparable group will remain unscreened. The group screened will be divided into those having positive and negative results. Multivariate analysis will be used to determine if health service events and related costs can be predicted from the variables available to this study.

FINDINGS:
Predictive models of health service utilization patterns among low-income populations will be developed. The project has relevance to Child Health Assessment Program (CHAP) and related policy issues.

RECORD NO. HS03812 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - PUBLIC PROGRAMS

TITLE: Public Schools, Health Care, and Handicapped Children

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
08-01-80	01-31-82	78,823	78,823	78,823

INVESTIGATOR NAME AND ADDRESS

CROSSLAND, CATHY L
NORTH CAROLINA STATE UNIVERSITY RALEIGH

RALEIGH
NORTH CAROLINA 27607

OBJECTIVE:
To investigate the degree of linkage between the health care and educational systems in the management of handicapped children in specialized education in grades Kindergarten to 6 in Wake County, North Carolina.

APPROACH:
Data will be obtained by examining the records of the estimated 2,000 children in special education to determine the nature of the handicapping condition, parental knowledge of the handicaps, socio-demographic information concerning the child and family, source of health care, other significant health problems, medical referrals, teachers' referrals, referrals by the school to be carried out by the parents, and medical input into the individual education plan required for each student in special education. Basic parametric and non-parametric forms of statistical testing will be used in the analysis plan.

FINDINGS:
This study could document the extent to which the medical care and public education systems interact (or not) in providing appropriate services to handicapped children, as well as measure the effectiveness of the service delivery systems. Finally, a model will be developed for improving the systematic delivery of health and educational services to handicapped children in public shcools.

RECORD NO. HS04047 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - PUBLIC PROGRAMS

TITLE: An Economic Analysis of Neighborhood Health Centers

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
04-01-80	03-31-82	67,559	67,559	137,925

INVESTIGATOR NAME AND ADDRESS

GROSSMAN, MICHAEL M
NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 MASSACHUSETTS AVE
CAMBRIDGE
MASSACHUSETTS 02138

OBJECTIVE:
To empirically evaluate the economic performance of neighborhood health centers; to compare health levels in counties that are similar except for the presence or absence of a neighborhood health center; to explore the relationship between payment mechanisms and efficiency to performance, the relative contribution of non-physician manpower, and trends in efficiency over time.

APPROACH:
A cross-section time series data set that contains information on inputs, outputs, costs, patient characteristics and financing of each of approximately 100 neighborhood health centers will be obtained from the Bureau of Community Health Services of DHEW. Using data from the Area Resource File, the authors will compare health services in different counties that are similar except for the presence or absence of a neighborhood health center. The methods of procedure will be least squares multi-variate regression analysis and various modifications thereof.

FINDINGS:
Recent government assessments of neighborhood health centers have produced mixed findings with some indicating neighborhood health centers efficient and others suggesting the centers highly inefficient. The investigators hope to provide useful insight with respect to future government policies regarding (1) improving access to health care by low income groups, (2) improving the health of these groups, (3) curbing the inflationary trend in health care costs, and (4) exploring the effects of different types of payment mechanisms on utilization patterns and the contribution of non-physician health manpower to delivery of health care. Additionally, the P.I. will assess whether there has been a tendency over time for the neighborhood health center to vary (increase or decrease) in the efficiency with which services are provided and identify the factors which are associated with such variation.

RECORD NO. HS04242 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - PUBLIC PROGRAMS

TITLE: Impact Evaluation of Programs for Mothers and Infants

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-80	06-30-81	30,947	30,947	30,947

INVESTIGATOR NAME AND ADDRESS

PEOPLES, MARY D
UNIVERSITY OF NORTH CAROLINA
CHAPEL HILL
NORTH CAROLINA 27514

OBJECTIVE:
To develop and test a set of rigorous, economic, and administratively feasible methods for the evaluation of maternal-infant programs, by means of two distinct, but interdependent scientific investigations.

APPROACH:
Key methodological problems in Maternal-Infant Care (MIC) program evaluations have been identified; a measurement model has been constructed; and alternative methods of MIC program evaluation are being developed. These alternative methods will be applied and tested using retrospective vital statistics and MIC program data, in two forms, both quasi-experimental designs: 1) a multiple time series; and 2) a Post-Test-only comparison group. Weighted least squares techniques for categorical data, multiple regression analysis, and regression techniques for time series analysis will be used to test three major hypotheses derived from the research question: "Has the MIC Project had an effect on the number of preterm and low birth-weight infants, and fetal and infant mortality?"

FINDINGS:
This study focuses on the effectiveness of Maternity and Infant Care (MIC) Projects, a core element of the current national effort to reduce infant mortality and other perinatal casualties. To address this problem, two interdependent investigations were conducted: 1) a conceptual analysis of the methodological problem encountered in impact evaluations, based upon 2) an evaluation of the Maternity and Infant Care Project in North Carolina. The investigator reports that the results of the evaluation of the North Carolina MIC Project suggests favorable influence on utilization of prenatal care and immediate pregnancy outcomes (i.e., fetal mortality and low birth weight deliveries), However, the findings also suggest no positive Project effects on neonatal mortality. The investigator concludes that, in combination, these results indicate that emphasis on comprehensive prenatal care in the MIC service delivery model should be coupled with equal emphasis on high quality neonatal care to more effectively reduce the incidence of prenatal casualties.

RECORD NO. HS04264 CATEGORY: HEALTH CARE AND THE DISADVANTAGED - PUBLIC PROGRAMS

TITLE: Plan Implementation in Health Systems Agencies

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-80	06-30-81	22,700	22,700	22,700	CHURGIN, SHOSHANNA WEST CONSORTIUM FOR CONT ED IN THE HLTH SAN FRANCISCO CALIFORNIA 94103

OBJECTIVE:
To explore ways in which organizational influences improve the successful implementation of Health System Agency plans and to identify the organizational characteristics of HSA's which are associated with successful plan implementation.

APPROACH:
In-depth case studies will be performed on 6 HSA's chosen from Regions VIII, IX and X of DHHS, three of which have been judged to have been very successful and three which have been judged unsuccessful in implementing their health system plans. The HSA's will be matched by demographic characteristics of their planning regions to make comparison groups as different as possible regarding achieving plan implementation but as similar as possible with regard to their environment. Data will be collected through interviews, survey questionnaires, observations and analysis of Plan Documents. The focus of the data collection will be on HSA member characteristics, organizational structure, interorganizational influence, goals pursued, nature of community setting, and implementation strategies and their outcomes. Case studies and group comparisons will be based primarily on the analysis of qualitative data.

FINDINGS:
This research will provide Health Systems Agencies with an effective means of implementing their health systems plans. This will be accomplished by identifying and testing the variables which are found to have an effect on successful plan implementation and determining how the HSA's can influence the decisions and actions of other health-service related organizations.

RECORD NO. HS03610 CATEGORY: HEALTH INSURANCE - BENEFITS AND COVERAGE

TITLE: A Policy Analysis of Coverage for Low Vision Services

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-28-79	09-30-81	16,022	49,189	49,189	KIRCHNER, CORINNE AMERICAN FOUNDATION FOR THE BLIND 15 W 16TH ST NEW YORK NEW YORK 10011

OBJECTIVE:
To provide information about the financing and delivery of low vision services.

APPROACH:
Information will be collected primarily through mail questionnaires sent to all known public and private low vision facilities in the US and to a representative sample of third party payers. Low vision clinics will be described in terms of their staffing and organizazation, characteristics of clients served, and availability, scope, and comprehensiveness of services and optical aids provided. Eligibility requirements will be explored, as well as the costs of services and who pays for them. Approximately 200 public and private third party payers will be surveyed to investigate characteristics of insurance coverage for low vision services and aids. Information sought will relate to eligibility, services covered, and reimbursement policies. Benefits available for low vision services through public programs, such as CHAMPUS, Medicare, Medicaid, and Vocational Rehabilitation, will also be investigated.

FINDINGS:
Information from the low vision clinic survey will improve current understanding of many aspects of low vision service delivery including what services are being provided, by whom, in what types of facilites and characteristics of those receiving services. The third party payer survey will provide information of direct policy relevance in the area of reimbursement for low vision services, by identifying the range and limitations of coverage provisions currently existing. The study addresses an issue which has been identified as important under Section 222 of P.L. 92-603 and in current deliberations over National Health Insurance.

RECORD NO. 233793024 CATEGORY: HEALTH INSURANCE - BENEFITS AND COVERAGE

TITLE: Effect of Cost Sharing on Beneficiaries of UMW Health Plan

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-28-79	12-31-81	0	342,765	446,765	CLARK, JERRY UNITED MINE WORKERS OF AMERICA 2021 K STREET WASHINGTON DISTRICT OF COLUMBIA 20006

OBJECTIVE:
The purpose of this study is to examine the impact on utilization of health services by a beneficiary population accustomed to free health care prior to the implementation of cost-sharing on July 1, 1977.

APPROACH:
The contractor will prepare an analysis of the impact of the introduction of 40 percent cost-sharing on beneficiaries and providers of care by the United Mine Workers of America Health and Retirement Funds which became effective on July 1, 1977. The analysis will center on the changes in the use, cost and charges for medical services as a result of the cost-sharing. Samples of the beneficiaries shall be determined by review of available data from the contractors' claims and enrollment rolls.

FINDINGS:
The cost-sharing program is expected to have a substantial effect upon health care utilization. Visits to the doctor, hospital admission, services per visit and costs to the health care plan are all expected to be reduced. Within visits to the doctor, it is expected that preventive care and upper respiratory care visits will be automatically reduced. A smaller, but significant reduction is expected in visits for chronic care.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. 233803005 CATEGORY: HEALTH INSURANCE - BENEFITS AND COVERAGE

TITLE: Clipping Service to Provide Recent Information on UMW Health and Retirement Fund and Cost Sharing Arrangements

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-27-80	06-29-81	51,734	51,734	51,734	ABBOTT, MARILYN KOBA 2000 FLORIDA AVENUE WASHINGTON DISTRICT OF COLUMBIA 20009

OBJECTIVE:
The objective is to obtain information from newspapers and magazines from January 1975 to December 1980 on health care benefits/medical care benefits and health care programs/medical care programs for active and retired members of the UMWA and their dependents, negotiations regarding the 1978 Coal-Wage Agreement and positions of providers, organized medicine, beneficiaries, the union and industry on the benefits programs and negotiations. (No hypotheses are tested)

APPROACH:
The contractor is providing all materials and other resources necessary to locate 13 specified newspapers and 12 specified magazines and identify and reproduce pertinent editorials and articles. For almost all of the newspapers, the contractor is relying upon the publication to provide articles in the relevant subject areas from the paper's own archives. For at least one newspaper, issues of the paper are being scanned at the Library of Congress for the required material. Magazines are being scanned at various libraries in the Washington, D.C. area for required material. The articles and editorials are reproduced and prepared for biweekly delivery.

FINDINGS:
All required information from selected publications was provided. A file of clippings has been prepared and is being used to supplement other data on the recent developments in the UMWA health benefits program.

RECORD NO. 233803006 CATEGORY: HEALTH INSURANCE - BENEFITS AND COVERAGE

TITLE: Survey of United Mine Workers of America Health and Retirement Fund Beneficiaries

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-80	09-28-81	144,417	144,417	144,417	BERRIGAN, JOHN CHILTON COMPANY 201 KING OF PRUSSIA ROAD RADNOR PENNSYLVANIA 19089

OBJECTIVE:
Obtain data on the influence of cost-sharing on utilization of health services and health status. Sociodemographic, income, and access variables will be collected to expand the analytical framework for the health insurance claims analysis. Data on access, health status, recent health utilization experiences and satisfaction will be collected and compared with similar data collected in 1975 before the introduction of cost-sharing. It is intended to collect data on present experiences with cost-sharing.

APPROACH:
A sample of 2300 families of active and retired miners, UMWA H&R beneficiaries, will be used as subjects for a survey. The survey will be administered by telephone with computer assistance.

FINDINGS:

RECORD NO. 233803007 CATEGORY: HEALTH INSURANCE - BENEFITS AND COVERAGE

TITLE: A Study of Clinic Case Management Under Changing Market Structure: The United Mine Workers Experience

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-80	01-15-82	358,329	358,329	419,529

INVESTIGATOR NAME AND ADDRESS

O'BRIAN, MARGARET
SYSTEMETRICS, INC
222 E ANAPAMER STREET
SANTA BARBARA
CALIFORNIA 93101

OBJECTIVE:
The objective of this contract is to collect data on medical care utilization among a group of UMW beneficiaries and a matched control group. These data will then be the focus of disaggregated utilization analysis done by NCHSR staff, to examine and analyze changes in episodes of treatment at the margin as a result of changes in organization and financial burden of the UMW health care program.

APPROACH:
The study will collect data for three time periods, on delivery and prices of services for selected episodes of treatment, measuring ambulatory level severity. The NCHSR analysis will test hypotheses derived from a supply-induced demand model. Differences in related and unrelated services delivered per episode and expenditures per period are expected to vary by medical specialty, the market context of physician practice, complexity of the case, and insurance status. Changes in episode management will be associated with changes in physician reimbursement, patient insurance status, and patient severity level through analysis of variance techniques, and a pooled cross-section time series regression. Primary medical record data from a random sample of "tracer" patients selected for three time periods for each of four diagnoses will be abstracted and computerized by the contractor to enable the above analysis.

FINDINGS:
The health status of miners and their familites will be compared to non-miners for the tracer conditions. It is expected that stage of illness (severity) for miners will be higher than for non-miners and that the differential will increase with copayment. It is further expected that, controlling for illness stage, physician use of revenue generating ancillary services will increase with copayment/fee for service. The change in reimbursement is expected to influence the structure of episodes, with a decline in the number of visits per episode and an increase in the number of services per visit. Increased intensity per visit is not expected to affect health status. Greater physician latitude in case management is expected for higher levels of illness stage, resulting in increased rates of marginal revenue return for these higher stages. Preventive and follow-up visits are expected to decrease, leading to an increase in clinic case-mix complexity. A limited model of supply-induced demand is expected to be verified.

RECORD NO. 233803010 CATEGORY: HEALTH INSURANCE - BENEFITS AND COVERAGE

TITLE: United Mine Workers Insurance Claims Data Collection

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-30-80	09-30-81	135,451	135,451	135,451	HERNANDEZ, TERRESITA JWK INTERNATIONAL CORP 7617 LITTLE RIVER TURNPIKE ANNANDALE VIRGINIA 22003

OBJECTIVE:
Collect claims data for a defined sample of United Mine Workers for the period March 1978 to March 1980. The contract will develop a data tape in a specified format for intramural analysis. The data are to be merged with data from prior periods to assess the effects upon use, costs and charges for medical services of the cost-sharing schemes introduced into the medical care program for the United Mine Workers.

APPROACH:
The data must be obtained from a variety of health insurance companies. First the approval of the employer who employs the sample subject must be obtained to allow the insuror to release the data. Data must be collected which is comparable to the United Mine Workers Health and Retirement Funds data in content and classification and coding.

FINDINGS:
The data are to be merged with other data which will be used in an analysis of the effects of cost-sharing on the part of coal miner beneficiaries. Analysis will center upon changes in: visits and admissions, services per medical care encounter, preventive, acute and chronic care visits, and costs and charges. The influence of factors such as household income and education level, measures of access to health resources, identification of a regular source of care and health status will also be assessed.

RECORD NO. HS03772 CATEGORY: HEALTH INSURANCE - DELIVERY SYSTEMS EFFECTS

TITLE: Dental Care Demand: Insurance Effects and Plan Design

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-29-80	09-28-83	157,966	157,966	351,014	CONRAD, DOUGLAS A UNIVERSITY OF WASHINGTON SEATTLE WASHINGTON 98195

OBJECTIVE:
To analyze the effect of insurance design (coinsurance, deductibles, and benefits) as well as socio-economic and demographic factors on the demand for dental care and to test for adverse selection and to measure its impact on utilization and cost.

APPROACH:
This study will combine beneficiary-specific and grouped data from the claims and eligibility files of the Pennsylvania Blue Shield Dental Plan for 1975-1979 with a planned individual and household survey from a sample of Pennsylvania Blue Shield subscribers to estimate the effects of insurance design on the utilization and cost of dental services. Determinants of dental care demand will be estimated separately for different socio-demographic groups to measure differential plan design impact. Service specific dental care demand estimates also will be derived. Time series and cross-sectional analysis will be used. The existence of adverse selection will be tested by examining relations between choice of insurance riders, eligibility and level of utilization and expenditure. Data analysis methods include regression analysis, discriminant analysis and contingency tables.

FINDINGS:
The results of this study should increase understanding of consumer response to dental insurance, both initially and over time. Knowledge of the impact of plan design on utilization and expenditure should be of interest in refining the analytical foundations for National Health Insurance.

RECORD NO. HS04313 CATEGORY: HEALTH INSURANCE - DELIVERY SYSTEMS EFFECTS

TITLE: Mineworkers Health PGM Effects on Coalfield Clinics

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-01-80	11-31-81	50,399	50,399	50,399

INVESTIGATOR NAME AND ADDRESS

KONRAD, THOMAS R
UNIVERSITY OF NORTH CAROLINA

CHAPEL HILL
NORTH CAROLINA 27514

OBJECTIVE:
To assess organizational changes in eastern coalfield health clinics during the period 1976 to 1980 brought about by a reduction in support from UMWA funds.

APPROACH:
Variations in health clinic organizational stability and viability will be assessed through an examination of changes in goals, staffing, internal structure, inter-organizational relations and services delivered. An inventory of primary care clinics in the eastern coalfields will be constructed, and eight clinics will be selected for site visits as case studies. Secondary data will also be used extensively.

FINDINGS:
It is anticipated that differences in organizational stability and viability will be found to be associated with clinic age, size, and degree and type of financial dependence on the funds. The importance of contextual factors such as availability of alternative resources and existence of competing organizations will also be explored.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS04317 CATEGORY: HEALTH INSURANCE - DELIVERY SYSTEMS EFFECTS

TITLE: Impact of Changes in UMWA Funds on WV Miner Clinics

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-80	12-31-81	46,363	46,363	46,363	DURMASKIN, BETTINA T WEST VIRGINIA UNIVERSITY MORGANTOWN WEST VIRGINIA 26506

OBJECTIVE:
To examine the impact and consequences of recent changes in miner health care coverage in the 14 West Virginia primary and multi-specialty clinics which had greater than 30% funds beneficiary participation as of July 1976.

APPROACH:
Information will be examined for four time periods, the baseline year - July 1976 to June 1977; the copayment period - July 1977 to December 1977; the strike period - December 1977 to March 1978; and the stabilization period - April 1978 to December 1978. Major topics to be addressed at each clinic include: changes in caseload, availability of providers, scope and mix of services, administrative decisions, and financial considerations.

FINDINGS:
Changes in utilization, availability of providers, and other major topics listed above which occurred between the baseline year and the stabilization period will be documented.

RECORD NO. 233803012 CATEGORY: HEALTH INSURANCE - DELIVERY SYSTEMS EFFECTS

TITLE: Data Processing Support for the Development of a Microsimulation Model of NHI

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
08-29-80	08-31-83	300,000	300,000	1,799,985	LEMAT, MARY FRANCES SOCIAL & SCIENTIFIC SYSTEMS 2401 VIRGINIA AVENUE, N.W. WASHINGTON DISTRICT OF COLUMBIA 20037

OBJECTIVE:
The NCHSR funded NMCES to provide data to support analyses of major issues of national health policy. The most important of these issues is National Health Insurance. This contract is to provide the data processing support for modelling National Health Insurance alternatives and all the component analyses such modelling entails.

APPROACH:
Because the number and nature of the research activities supported by this contract varies greatly, the support activities also vary greatly. The primary activities include: development and maintenance of analytical and simulation files, and program development for simultaneous estimations and microsimulation models.

FINDINGS:

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. 230760268 CATEGORY: HEALTH INSURANCE - COMPREHENSIVE EXPENDITURE STUDIES

TITLE: National Medical Care Expenditure Survey

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-29-76	08-14-81	654,526	21,694,424	21,697,995	WOODSIDE, MARY B RESEARCH TRIANGLE INSTITUTE P.O. BOX 12194 RESEARCH TRIANGLE PK NORTH CAROLINA 27709

OBJECTIVE:
The objective of this contract is to provide data for a series of research studies being conducted in the Intramural Research Division as a part of the National Health Care Expenditures Study.

APPROACH:
Data for NMCES were obtained in three separate, complementary stages which surveyed (1) approximately 14,000 randomly selected households in the civilian noninstitutionalized population and in which each household was interviewed six times over an 18-month period during 1977-78; (2) physicians and health care facilities providing care to household members during 1977; and (3) employers and insurance companies responsible for their insurance coverage.

FINDINGS:
The National Health Care Expenditures Study will analyze a number of issues: the cost, utilization, and financing implications of various national health insurance proposals; the influence of Medicare and Medicaid programs on the use of medical services and the costs of providing care; the extent of and reasons for changes in Medicaid participation over time; the extent to which different government programs at the Federal, State, and local levels affect access to care in different treatment settings; the distribution of benefits to individuals and businesses under current tax laws concerning medical and health insurance expenses, and the potential changes in the distribution of such benefits were these laws to change; the costs of of illnesses for different diagnostic problems in different treatment settings; and the breadth and depth of coverage, and the proportion of medical costs paid by health insurance.

RECORD NO. HS03647 CATEGORY: HEALTH MANPOWER - LABOR SUBSTITUTION

TITLE: Impact of Opthalmic Technicians on Outpatient Care

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-79	12-31-81	21,993	51,381	51,381	TROBE, JONATHAN D UNIVERSITY OF FLORIDA GAINESVILLE FLORIDA 32611

OBJECTIVE:
To assess the cost-effectiveness, measurement consistency and patient and staff acceptance of opthalmic technicians in the delivery of outpatient eye care services.

APPROACH:
A minimum of 500 outpatients will receive multiple examinations at the VA Hospital Gainesville Eye Clinic by opthalmic technicians, opthalmic residents and opthalmologists. Criteria will include such items as patient history, observations, measurements, diagnosis, and disposition. Tasks involved in the examinations will be inventoried and task completion times will be recorded for the technicians and the MDs. Patient and staff satisfaction will be assessed using questionnaires and interviews. Various optimal staffing patterns (i.e., technician to physician ratio) will be investigated under various combinations of task assignments, facility configurations, patient mixes and factor prices.

FINDINGS:
Specific findings are expected concerning the impact of the utilization of ophthalmic technicians within an outpatient setting. Findings will have general relevance for planning issues such as the extent that the physician extender roles can be applied to eye and vision care and the magnitude of savings in time and money resulting from manpower substitutions. Preliminary findings at the end of year one indicate there is no significant difference in the quality of care provided by the ophthalmic technicians and ophthalmologists and patients' satisfaction with care by the technician was at least as high as, and in many cases higher, than satisfaction with the physicians.

RECORD NO. HS04255 CATEGORY: HEALTH MANPOWER - LABOR SUBSTITUTION

TITLE: Economic Impact of NHP Patient Delegation Patterns

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
08-01-80	10-31-81	25,885	25,885	25,885

INVESTIGATOR NAME AND ADDRESS

FREUND, CYNTHIA M
UNIVERSITY OF ALABAMA IN BIRMINGHAM
UNIVERSITY STA
BIRMINGHAM
ALABAMA 35294

OBJECTIVE:
To compare two types of practice settings utilizing nurse practitioners (NPs) and practice setting without an NP with regard to costs and productivity.

APPROACH:
Three practice settings will be selected to collect data that will be used to develop a recursive optimization-simulation model for the utilization of nurse practitioners. One practice setting will utilize the parallel pattern which assumes that some patients will be seen by the physician alone, some by the NP alone, and some by both the NP and the physician. The second will employ a consultative pattern in which it is assumed that the majority of the patients are seen by the NP; patients are seen by the physician only when the NP or MD deem it necessary. The control will be a practice in which no NP is employed. Hypotheses are that the parallel delegation pattern will result in greater productivity and economic benefits than the consultative pattern; both delegation patterns will result in greater productivity than the control practice; and both parallel and consultative patterns will achieve greater economic benefit than the control practice. Data collection will be done through a survey of practice site records and direct non-participant observation of the practices using work sampling techniques.

FINDINGS:
There is a consensus that the practice setting is a major determinant in the utilization of NPs. This study should shed some light on the cost and productivity of two of the most common practice patterns employing NPs. Previous studies have not looked at patterns of delegation, practice history of the NPs or the team composition as they relate to cost and productivity, including practice income.

RECORD NO. HS04336 CATEGORY: HEALTH MANPOWER - LABOR SUBSTITUTION

TITLE: Prescribing Practices of Nurse Practitioners

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-22-80	03-31-82	44,498	44,498	44,498	BATEY, MARJORIE V UNIVERSITY OF WASHINGTON SEATTLE WASHINGTON 98195

OBJECTIVE:
To describe drug prescribing practices of nurse practitioners (NPs) under varying conditions of autonomy, represented through legal constraints placed on NP prescriptive privileges in four Northwest States.

APPROACH:
The nurse practitioners (NPs), (approximately 400-450) who have been granted prescriptive authority in Washington, Oregon, Alaska and Idaho are the focus of this study. Three survey research measures will be used for collecting the following data; prescription logs, kept for 10 consecutive days, will produce information on the drugs prescribed and the NP interactions with patients and physicians; description of nurses and their practices, a 17 item questionnaire; and nurses views and experiences with prescriptive authority, a 34 item questionnaire. An estimated 24,000 client visits with 12,000 prescriptions are anticipated. Data analysis will be descriptive and exploratory.

FINDINGS:
This study should provide baseline data for policy decisions, future studies examining the overlapping functions of health care providers, reimbursement, access to primary care, the quality and costs of that care, and influences on prescriptive practices. This is the first study looking at this particular issue regarding Nurse Practitioners. Comparison of data between states should yield needed information concerning prescriptive practices under two extremes of legal control.

RECORD NO. HS03687 CATEGORY: HEALTH MANPOWER - PHYSICIAN BEHAVIOR

TITLE: Pediatrics: A Study of Professional Specialization

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	06-30-81	0	26,192	26,192

INVESTIGATOR NAME AND ADDRESS

HALPERN, SYDNEY A
UNIVERSITY OF CALIFORNIA BERKELEY

BERKELEY
CALIFORNIA 94720

OBJECTIVE:
To study the evolution of pediatrics in the U.S. from 1920 to the present. The investigation will focus on the process of professional specialization and the impact of this process on the delivery of health services to children. In addition to providing an analytic description of the organizational growth and consolidation of a medical specialty, the study will involve consideration of three hypotheses.

APPROACH:
The investigation will make use of a wide range of data including written documents and information obtained from consultants with expertise in the field of child health. Analytic methods used will be drawn from the field of historical sociology. Hypotheses focus on: (1) Built into pediatrics as it was institutionalized were certain tensions and strains regarding the nature of pediatrics as a field of interest and with requirements imposed by the emerging structure of specialization within medicine. These tensions resulted in major realignments in the specialty's orientation to the problems of child health. (2) investigation of changing patterns of collaboration between the Federal government and the specialty will reveal progressively greater influence on the part of organized pediatrics in determining national child health policy. (3) The unfolding dynamics of professional specialization in pediatrics and new forms in the specialty's partnership with the Federal government have had long-term documentable consequences for how services for children are organized.

FINDINGS:
The results will engender information useful in devising strategies for achieving a better balance among medical specialties. The study's analysis of the structure and politics of graduate medical education will provide new ideas among the optimal institutional locus of Federal intervention. Its account of the influence of child health programs on primary care training in pediatrics will assist in assessing the effectiveness of these types of Federal incentives.

RECORD NO. HS03808 CATEGORY: HEALTH MANPOWER - PHYSICIAN BEHAVIOR

TITLE: Location of Physicians Specialists in Rural Areas

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-15-79	12-31-80	0	52,177	52,177

INVESTIGATOR NAME AND ADDRESS

WILLIAMS, ALBERT P
RAND CORPORATION
1700 MAIN ST
SANTA MONICA
CALIFORNIA 90406

OBJECTIVE:
To analyze data on the location of board certified specialists by town in 25 rural states for the period 1960-1977; to explore factors that are associated with the presence of a specialist in a town; and to estimate the effects of changes in the location of specialists on the distance the rural population must travel to receive speciality care.

APPROACH:
The Principal Investigators (P.I.'s) will utilize computerized data bases to determine characteristics associated with the migration of physicians from rural urban areas over a 17 year period in 25 rural states. Data such as the size and distribution of cities and towns larger than 2,500 population in each state and the location of urban population centers "cities over 25,000" utilizing census tracts will array physicians in population areas of both low and high density. The P.I.'s will utilize population grids and will prepare tabular presentations and plots to show the location of each type of specialist in each area for each year selected for study (1960, 1970 and 1977). Logistic regression will be used to estimate the probability that a specialist will locate in a town as a function of its size or other socio-demographic attributes. A computer program will calculate the distance of the non-urban population from the nearest specialist of each type.

FINDINGS:
This proposed project should shed some new light on the way in which board certified specialists have distributed themselves for the roughly 17 year period, how this distribution has altered the distance that non-urban dwellers must travel in order to reach a particular kind of specialist. The authors feel that on the basis of these findings and estimates of demand it might well be possible to make some crude predictions about how new specialists will distribute themselves during the next 5 to 10 years. Should these predictions suggest that specialists will be more widely distributed and travel time reduced to modest levels within the next few years, policy implications will certainly be significant. Also, should the matrix suggested prove workable, useful insight will also be derived from knowing whether the presence of any given type of physician in a community might serve as a predictor for the appearance of another type of specialist over a period of years. This then would enable the P.I.'s to anticipate the profile of specialists in various communities throughout the United States using this type of predictive methodology.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS03880 CATEGORY: HEALTH MANPOWER - PHYSICIAN BEHAVIOR

TITLE: Demarketing and Administrative Strategies in Drug Use

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	03-31-82	109,158	291,924	291,924	AVORN, JEROME L HARVARD UNIVERSITY BOSTON MASSACHUSETTS 02115

OBJECTIVE:
To study two means of influencing the appropriateness of physician prescribing: Through an administrative intervention performed by Medicaid on all physicians in Massachusetts, and through a personal intervention that they will execute in two other states. Both studies will use a Medicaid dataset for accurate measures of actual prescribing behavior.

APPROACH:
Evaluate the completed administrative intervention previously carried out by the Massachusetts Medicaid Program in Phase I of the study. In Phase II demarketing strategies are prepared using a rigorous research design with randomization to the following groups; control (no intervention), or combinations of four experimental interventions: a conventional fact sheet, an arresting series of "un-advertisements," advice on alternatives to using the target drugs, and contact by a professional representative. Before and after Medicaid records of prescribing data will be used to evaluate each component of this intervention as well.

FINDINGS:
Relevant finding resulting from Phase I research were incorporated into the intervention design for Phase II. The findings are as follows: Clinical efficacy and safety are more important determinants of drug product selection than cost. Cost may be increasingly important, however, in states with generic drug laws; the placebo effect and patient demands for a prescription drug are important influences on physicians in prescribing of the target drugs, particularly propoxyphene (Darvon, etc.); convenience (dosage pattern, etc.) for the patient and its positive relationship with compliance is an important factor in physician decision-making; personal communications with peers and detail people, and concise written communications from reputable sources are preferred by physicians over articles in scientific literature; visually and emotionally provocative images and headlines coupled with logical, rational copy are common elements in effective pharmaceutical advertisements. It is expected that the Phase II Educational Communication and personal intervention will improve prescribing behavior and improve the cost effectiveness of prescribing.

RECORD NO. HS03918 CATEGORY: HEALTH MANPOWER - PHYSICIAN BEHAVIOR

TITLE: Pharmacokinetics Labs' Impact on M.D. Prescribing

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	01-30-81	0	49,025	49,025

INVESTIGATOR NAME AND ADDRESS

BEARDSLEY, ROBERT S
UNIVERSITY OF MARYLAND AT BALTIMORE
525 W REDWOOD ST
BALTIMORE
MARYLAND 21201

OBJECTIVE:
To evaluate the impact of physician prescribing and subsequent patient outcomes of conducting and feeding back analyses of blood samples from epileptic outpatients receiving anticonvulsant medications with respect to the absorption, distribution, excretion, and metabolism of drugs relative to their therapeutic or toxic effects.

APPROACH:
Retrospective data analysis will be carried out on a sample of approximately 200 patients seen at the Adult Seizure Clinic at the University of Maryland Hospital. Data will be collected concerning patient outcomes and physician prescribing on two groups of patients identified as: those patients treated prior to the initiation of Clinical Pharmacokinetics Laboratory (CPL) Services & those patients treated after initiation of services. The protocol is designed to test two hypotheses and will deal with the questions of what effect providing CPL test results have on physician prescribing and patient outcomes and what effect using CPL test results may have on patient outcomes. The outcomes to be reviewed include number of seizures, rehospitalizations, and toxic reactions.

FINDINGS:
Within the past ten years, the health discipline called Clinical Pharmacokinetics has emerged to assist clinicians in the therapeutic decision-making process. It is anticipated that this study will serve to objectively evaluate the impact and cost benefit of CPLs in patient management. It may also be possible to expand this service to other health care providers such as physicians assistants, nurse practitioners, and pharmacists who can order these tests in order to make better patient assessments.

RECORD NO. HS04054 CATEGORY: HEALTH MANPOWER - PHYSICIAN BEHAVIOR

TITLE: Surgical Decision Making and Operative Rates

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
03-01-80	12-31-81	51,303	51,303	51,303	RUTKOW, IRA M JOHNS HOPKINS UNIVERSITY CHARLES AND 34TH STS BALTIMORE MARYLAND 21218

OBJECTIVE:
To explore three facets of the problem of surgical decision-making; 1) basic differences in inclination to operate between American, British and Canadian surgeons, and the magnitude of these differences as they relate to the performance of seven elective procedures; 2) the relationship between certain educational and organizational factors and their effects on surgical judgment; 3) the reliability and reproducibility of clinical surgical judgment, and its effect on the current implementation of elective surgery second opinion programs.

APPROACH:
Four vignettes have been developed to examine issues for each of the seven disease processes. These case histories will be mailed to randomly selected Board certified surgeons or their equivalent from selected states, provinces and health districts in the U.S.,Canada and England, with chosen areas having data systems available that contain known operative rates for the procedures under study. The surgeons will be asked to indicate if they would or would not perform the procedure. The YES responses will be counted and thus provide a measure of the tendency to operate for each country. The relationship between the educational, financial, and organizational factors and a surgeon's willingness to perform elective surgery will be examined. The extent of agreement/disagreement among the surgeons for each care vignette will provide an indication of the reliability of clinical decision making with regard to elective operations.

FINDINGS:
This study is of major significance as it relates to the likelihood of impact of particular strategies to reduce surgical rates and hence the cost of care. However, in the long run, it may not have much of an impact in reducing the amount of surgery if factors external to individual surgeons influence the performance of surgery: such as the possibility that surgical rates are a function of societal philosophies and expectations. On the other hand, demonstration of a relationship between particular types of education, types of remuneration, or types of organization and tendency to operate would support implementation of strategies directed at particular institutions or surgeons.

RECORD NO. HS04104 CATEGORY: HEALTH MANPOWER - PHYSICIAN BEHAVIOR

TITLE: Effectiveness in Physician-Nurse Practitioner Teams

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-01-80	02-28-82	71,566	71,566	107,838

INVESTIGATOR NAME AND ADDRESS

BENNETT, SUSAN D
HARVARD COMMUNITY HEALTH PLAN
80 BRIGHTON AVE (ALLSTON)
BOSTON
MASSACHUSETTS 02134

OBJECTIVE:
To study variations in relationships between physicians and nurse practitioners working as teams to understand; what factors determine the form that a particular relationship will take, and how the team relationship affects productivity and provider satisfaction.

APPROACH:
Data will be collected on 30 MD-NP primary care teams at the Harvard Community Health Plan. The teams have been working together for an average of three years. Each team is responsible for the care of a particular panel of patients. Administrative records will be used to determine level of team productivity. A provider questionnaire will measure the various aspects of team functioning. Data includes the team's work style, e.g., hierarchical or collegial, performance of the same or different types of clinical tasks, and care for the same patients or split patients into two groups with each provider working more or less independently; and provider attitude toward the work style, e.g., whether they agree or disagree about goals of their practice and their respective roles and the consequences those attitudes may have on role satisfaction and productivity.

FINDINGS:
It is hypothesized that agreement in role expectations is more important than the work style of the team in team functioning. Should congruity between teammate's preferences regarding practice structures prove an important factor in determining positive outcomes, administrators in settings where MD-NP teams are utilized could assess employees along the relevant dimensions defined in this study with regard to role expectations, job satisfaction, and potential productivity. The conceptual and methodological tools developed in the course of this research will provide a method for measuring such interpersonal variables.

RECORD NO. HS04127 CATEGORY: HEALTH MANPOWER - PHYSICIAN BEHAVIOR

TITLE: Physician Retention in Prison Health Programs

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
03-01-80	07-31-81	54,636	54,636	54,636	LICHTENSTEIN, RICHARD L UNIVERSITY OF MICHIGAN 109 OBSERVATORY STREET ANN ARBOR MICHIGAN 48109

OBJECTIVE:
To determine the various factors that are associated with physician satisfaction and retention in correctional health programs.

APPROACH:
This study will be directed at the entire universe of physicians involved in correctional health programs rather than a sample of such physicians because of the absence of information upon which to base a sample design, and the modest number of physicians estimated to be engaged in correctional health care. The following definition of a respondent will be used; "Any licensed physician who sees patients for the diagnosis or the treatment of nonpsychiatric problems, on a regularly scheduled basis for at least twelve hours per month, in a state or Federally operated, adult prison." Based on data that are available it is believed that the potential population for this study involves some 1100-1300 physicians. The total number of prisons in the U.S. is 590, but some of these will not be included due to the absence of on-site physician coverage. This study will analyze personal, career characteristics, and institutional factors and their influence upon retention of physicians in correctional institutions.

FINDINGS:
The conclusion reached in this study is that the factors associated with physician termination, and its inverse, retention, are such that a strategy aimed at maximizing physician retention in prisons does not seem appropriate. The factors associated with physician termination either: fall out of the control of prison health administrators (prison overcrowding, maximum security designation of institutions, or old age of facilities housing inmates); would make recruitment difficult; or potentially conflict within other correctional health goals (hiring older physicians would increase retention rates but probably would decrease efficiency, productivity and quality of care). The argument is made that physician retention should become a secondary goal of correctional health administrators and that administrators should seek to accomplish the goal of continuity of care through the use of ancillary personnel, record system, etc., and through the organization of their medical programs with moderate physician turnover as a built-in constraint.

RECORD NO. HS04153 CATEGORY: HEALTH MANPOWER - PHYSICIAN BEHAVIOR

TITLE: Synthesis of Research on Physician's Career Choices

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
05-01-80	02-28-81	49,597	49,597	49,597

INVESTIGATOR NAME AND ADDRESS

WILSON, SANDRA R
AMERICAN INSTITUTES FOR RESEARCH
BOX 1113
PALO ALTO
CALIFORNIA 94302

OBJECTIVE:
To analyze and synthesize the findings of several major recent studies that have produced information concerning the factors affecting specialty choice and practice location as regards the career development of physicians.

APPROACH:
The project will critically analyze the reported results of the AAMC and Project Talent longitudinal studies of physicians and the Division of Medicine study of physician location decisions to identify areas of apparent agreement and disagreement, areas where results are not directly comparable, and areas where further analysis would yield comparable results; and conduct further analyses of the three data bases in order to further clarify areas of agreement and disagreement.

FINDINGS:
There is a high degree of consistency between the 1960 and (circa) 1970 cohorts in the relative socio-demographic, ability, interest, and educational experience profiles of physicians in given specialties and given community sizes. Both specialty and location groups are more strongly differentiated by religion in the 1970 than in the 1960 cohorts, but they are less strongly differentiated in terms of MCAT scores and the public/private character of the medical schools they attended. Previous analyses of the Project TALENT cohort were clearly replicated in the additional analyses of the AAMC cohort with respect to the factors associated with specialty and location choice and the general predictability of these outcomes. In many instances relationships were not only similar in form but bore a striking similarity in magnitude. In addition, certain cohort differences were found that appear attributable to social and/or professional changes in the decade intervening between the two cohorts.

RECORD NO. HS02038 CATEGORY: HEALTH MANPOWER - TRAINING

TITLE: Model for Criterion-Referenced Medical Specialty Test

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-77	09-29-82	185,556	498,382	588,759	MAATSCH, JACK L MICHIGAN STATE UNIVERSITY EAST LANSING MICHIGAN 48824

OBJECTIVE:
To develop and validate practical methods for improving the predictive validity of licensing and specialty certification examinations through one or more criterion measures of the quality of clinical performance in the practice setting.

APPROACH:
In the first two years of this grant the Specialty Board Examination for Emergency Medicine Physicians was developed and administered. It consisted of multiple choice questions, pictorials, patient management problems, and simulated patient encounters. The present study proposes to test whether there is a relationship between the scores of the candidates on each of these types of examinations and their actual practice. A pilot study on 100 candidates for the Board exam at 10 or more emergency departments in large urban hospitals will be done to test the methods and feasibility of a national study. The model includes test scores, the background of the physicians, patient characteristics and practice setting characteristics to produce the predictive validity of the quality of clinical performance. Actual performance will be measured by chart stimulated recall assessment, critical incident check list, independent chart audit, and other performance check lists. The chart stimulated recall assessment is a new method to be developed during this research.

FINDINGS:
If the pilot study proves feasible and a larger study is done the fourth year of this research, it could provide empirical data on: the reliablity and validity of specific measures of clinical performance that can be used for other specialities; cost-effective methods to improve the predictive validity of existing licensing and certification examinations; the predictive validity and utility of a specific, criterion-referenced specialty certification examination, each of its test formats, and the practice consequences of standards established for the examination; and the relative contribution of a number of background, setting, and practice variables to the quality of care provided patients visiting emergency departments.

RECORD NO. HS03813 CATEGORY: HEALTH MANPOWER - TRAINING

TITLE: Computerized Prehospital Skill Development/Maintenance

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-79	09-30-81	248,514	470,514	470,514	WOLFE, HARVEY UNIVERSITY OF PITTSBURGH 4200 5TH AVE PITTSBURGH PENNSYLVANIA 15260

OBJECTIVE:
To develop a methodology and associated model that can be utilized in planning and monitoring the manpower skill requirements of the pre-hospital phase of an Emergency Medical Service (EMS) system.

APPROACH:
This research consists of four interrelated tasks. First, prehospital care algorithms and data collection systems already in place will be utilized to develop and test a model for determining prehospital care demand and skill requirements based on population characteristics. Second, data bases for monitoring prehospital care including specification of performance measures for paramedics. The final task will use census data and the output of the first three tasks to develop a model for projecting prehospital training requirements for a region.

FINDINGS:
The expected products of this research are a methodology for determining the skill requirements for prehospital care personnel given a specific service area and population at risk, and an evaluation of the extent of Emergency Medical Technicians prehospital skill decay under varying degrees of field experience and clinical service. This will have dual significance in that it will apply to immediate training expenditures for prehospital care personnel as well as long term policy decisions that are inherent in the allocation process.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS04288 CATEGORY: HEALTH MANPOWER - TRAINING

TITLE: Effects of Reducing Federal Aid for Medical Education

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-80	02-28-81	48,187	48,187	48,187

INVESTIGATOR NAME AND ADDRESS

LEE, ROBERT H
URBAN INSTITUTE
2100 M ST NW
WASHINGTON
DISTRICT OF COLUMBIA 20037

OBJECTIVE:
The goal of this research is to detail the likely consequences of reductions in capitation and educational loan subsidies with emphasis on the effects of Federal aid-reductions on minority, low-income, moderate-income, and female students.

APPROACH:
This study examines potential responses to cost increases, focusing on changes in who applies, changes in the demand for loans and scholarships, and changes in debt burdens. The study is to have four main parts: 1) delineation of levels and trends in students' demographic characteristics, in costs and tuitions, in sources of student funds, and in medical school revenues; 2)discussion of medical school costs and their impact on financial rewards in medicine; 3) empirical analyses of variations in application patterns and in the demand for financing; and 4) simulations of variations in debt burdens with respect to policy alternatives. Empirical analyses will rely on standard multivariate regression techniques using secondary data obtained from the Association of American Medical Colleges. The unit of analysis will be the medical school. Simulation analyses will use standard discounting procedures. Physicians' incomes by age, specialty, and location, needed for simulations, will be derived from the 1976 HCFA Survey.

FINDINGS:
The findings from this study: Federal capitation payments represent only about 2 percent of medical schools' revenues; eliminating capitation completely would increase tuitions by no more than $1,000 per year; medical education has been and is likely to continue to be a very good investment; state policies are the primary determinants of medical students' educational costs, and most students do not face particularly high tuition; and although medical school tuitions have been rising faster than general inflation, minority and less affluent applicants have not been deterred thus far. These conclusions are based on data from the late 1970s when loan and scholarship funds were increasing. Where loan funds, especially, decreased, the Investigator states less affluent students would experience financing problems at schools with high tuitions.

RECORD NO. HS03014 CATEGORY: HEALTH MANPOWER - NON-PROFESSIONAL HEALTH LABOR MARKET

TITLE: Deployment and Career Trends of Physicians Assistants

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-78	12-31-80	3,514	40,989	40,989

INVESTIGATOR NAME AND ADDRESS

PERRY, HENRY B
MAINE MEDICAL CENTER
22 BRAMHALL ST
PORTLAND
MAINE 04102

OBJECTIVE:
To perform a trend analysis of the professional experience of physicians assistants (PAs) from 1974 to 1978.

APPROACH:
Data from the 1977 and 1978 surveys of physicians assistants conducted by the Association of Physicians Assistants Programs and American Academy of Physician Assistants will be examined to assess possible trends in employment and career patterns among physicians assistants since the comprehensive survey of the profession which was conducted in 1974. (Data are available on 73 percent of the PA profession as it existed at that time.) Physicians assistants' specialties, types of practices, geographic locations, post graduate education and income attainments, and rate of entry in fields of employment outside of the PA profession will be compared. Data will be analyzed using cross tabulation techniques supplemented by multi-variate techniques (such as path analysis).

FINDINGS:
New information is presented regarding the patterns of employment and career advancement which are emerging within the PA profession. A determination of the stability of patterns in choice of specialty, practice setting and geographical location is made. The potential of the present and future impact of PAs on the health care delivery system (e.g., their employment in urban hospitals as replacements for foreign medical graduates and surgical house staff) is made based on the data presented.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS04031 CATEGORY: HEALTH MANPOWER - NON-PROFESSIONAL HEALTH LABOR MARKET

TITLE: Turnover and Absenteeism Among Hospital Employees

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-80	06-30-83	89,299	89,299	273,693	PRICE, JAMES UNIVERSITY OF IOWA IOWA CITY IOWA 52242

OBJECTIVE:
To identify the major determinants of turnover and absenteeism among hospital personnel related to hospital characteristics which can be modified by the hospitals.

APPROACH:
This is a three year proposal to study employee turnover and absenteesim in six community hospitals in Denver, Colorado. The investigators will expand on their previous research on determinants of turnover alone, testing the model for absenteeism. In addition, it will be expanded from only nurses to all hospital personnel. Data collection will be by a structured questionnaire mailed to the homes of the estimated 4,000 employees of these six hospitals. A response rate of 60% is anticipated, giving them an N of 2,400 for their multivariate analytic procedures in data analysis. The questionnaires will be mailed at two points in time, September 1, 1980 and September 1,1981. Data on turnover and absenteeism will be collected from the hospitals at six month intervals after each questionnaire.

FINDINGS:
The major theoretical significance of the proposed research is to test a comprehensive causal model of turnover and absenteeism. It is expected that data collected from "leavers" after their separation will be more valid than exit interviews. Based on these findings, recommendations will be made to the participating hospitals for interventions to decrease turnover. The extent to which a causal model for turnover also applies to absenteeism among hospital personnel will be tested.

RECORD NO. HS01964 CATEGORY: HEALTH SERVICES RESEARCH CENTERS - HEALTH SERVICES RESEARCH CENTERS

TITLE: Health Services Research and Development Center

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
03-01-76	05-31-81	256,667	1,898,717	1,898,717	SHAPIRO, SAM JOHNS HOPKINS UNIVERSITY CHARLES AND 34TH STS BALTIMORE MARYLAND 21218

OBJECTIVE:
To conduct health services research and analyses. The Center is concerned with the identification of characteristics of delivery systems, providers, population, and community that affect the economics, accessibility, utilization, and quality of care; and with the assessment of the relative significance of these characteristics.

APPROACH:
The Center utilizes NCHSR "core" funding to support administrative costs of the Center and a multidisciplinary staff. Other sources of support are sought for specific projects. The Center carries on a program of technical assistance; disseminates research findings through refereed journals and a periodic newsletter; offers educational opportunities to students and practitioners, and conducts research.

FINDINGS:
The Center is one of a group mandated by Public Law 93-353. The Center conducts an independent program of research that reflects regionalized needs to a significant degree. The Center offers proximity, knowledge of regionalized concerns, and responsiveness to a localized constituency. Examples of projects are a study of the role of public service employment in the health field (CETA in the Baltimore area), a manpower and utilization study of the Columbia Medical Plan, the effects of health education on hypertension, and a program of research on emergency medical services.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS01971 CATEGORY: HEALTH SERVICES RESEARCH CENTERS - HEALTH SERVICES RESEARCH CENTERS

TITLE: Core Support for Health Services Research Center

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-16-76	08-15-81	250,670	1,735,205	1,735,205	DE FRIESE, GORDON H UNIVERSITY OF NORTH CAROLINA CHAPEL HILL NORTH CAROLINA 27514

OBJECTIVE:
To conduct health services research and analyses. Emphasis is given to research on primary care issues as they affect needs of the Southeastern Region of the United States. Dental manpower needs, rural health, and health promotion are of a particular concern to the Center.

APPROACH:
The Center utilizes NCHSR "core" funding to support its administrative costs and a multidisciplinary staff. Other sources of support are sought for specific projects. The Center carries on a program of technical assistance; disseminates research findings through refereed journals and Center-published newsletter; offers educational opportunities to students and practitioners; and conducts research activities.

FINDINGS:
The Center is one of a group mandated by Public Law 93-353. The Center conducts an independent program of research that reflects regionalized needs to a significant degree. It offers proximity, knowledge of regionalized concerns, and responsivenass to a localized constituency. Examples of policy-oriented projects include the evaluation of a national program of disease prevention and health promotion, and a long-term evaluation of alternative forms of providing primary care to rural residents.

RECORD NO. HS01978 CATEGORY: HEALTH SERVICES RESEARCH CENTERS - HEALTH SERVICES RESEARCH CENTERS

TITLE: Health Services Research Center Support

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-16-76	08-31-81	219,431	1,726,447	1,726,447	SHORTELL, STEPHEN M UNIVERSITY OF WASHINGTON SEATTLE WASHINGTON 98195

OBJECTIVE:
To conduct health services research and analyses for health care decision-makers. Emphasis is placed upon health manpower research, planning and regulatory issues, public expenditures, and evaluation of alternative delivery systems.

APPROACH:
The Center utilizes NCHSR "core" funding to support administrative costs of the Center and a multidisciplinary staff. Other sources of support are sought for specific projects. The Center carries on an active program of technical assistance; disseminates research findings through refereed journals, Center newsletters, and a Policy Research Series; offers educational opportunities to students and practitioners; and conducts research activities.

FINDINGS:
The Center conducts an independent program of research that reflects regionalized needs to a significant degree. The Center offers proximity, knowledge of regionalized concerns, and responsiveness to a localized constituency. Examples of policy-oriented efforts include studies of the financial viability of National Health Services Corps physicians in the Northwest, and the use of the Medical Management Information System in Washington State to determine numbers of Medicaid eligibles and their utilization patterns. The Center is one of a group mandated by P.L. 93-353.

RECORD NO. HS02015 CATEGORY: HEALTH SERVICES RESEARCH CENTERS - HEALTH SERVICES RESEARCH CENTERS

TITLE: A Health Services Research Center

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
02-16-76	07-31-81	113,528	1,390,271	1,390,271

INVESTIGATOR NAME AND ADDRESS

ROEMER, RUTH
UNIVERSITY OF CALIFORNIA LOS ANGELES
405 HILGARD AVE
LOS ANGELES
CALIFORNIA 90024

OBJECTIVE:
To conduct health services research and analyses. The Center conducts an expanding program of research which has emphasized inquiries into the impact of involving individuals in the process of their own health care as a means of altering health-related behaviors in order to achieve more optimal outcome.

APPROACH:
The Center utilizes NCHSR "core" funding to support administrative costs of the Center and a multidisciplinary staff. Other sources of support are sought for specific projects. The Center carries on a program of technical assistance; disseminates research findings through refereed journals and a periodic newsletter; offers educational opportunities to students and practitioners; and conducts research activities.

FINDINGS:
The Center conducts an independent program of research that reflects regionalized needs to a significant degree. The Center offers proximity, knowledge of regionalized concerns, and responsiveness to a localized constituency. Activities include a study of child-initiated care in a local school district, the development of a health education curriculum, a methodological study of assessment of health care attitudes, and the use of contracts to influence patient compliance. The Center is also expanding its research activities to include long-term care and publicly-supported health policies. The Center is one of a group mandated by Public Law 93-353.

RECORD NO. HS02577 CATEGORY: HEALTH SERVICES RESEARCH CENTERS - HEALTH SERVICES RESEARCH CENTERS

TITLE: Health Care Management Center

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
10-01-76	03-31-82	874,500	4,138,745	4,633,745	PIERSKALLA, WILLIAM P UNIVERSITY OF PENNSYLVANIA PHILADELPHIA PENNSYLVANIA 19104

OBJECTIVE:
To carry out a National program of research aimed at the organization and management of health services and the training of administrators, through the use of a multidisciplinary group of researchers and support staff.

APPROACH:
The Center is awarded "core" support for administrative costs and a multidisciplinary staff, addressing a broad scope of health services research. An additional amount is awarded for specific projects in the area of special emphasis| health care management research. On the latter issue, the Center delivers technical assistance, disseminates its findings through refereed journals, offers educational opportunities in heath care management and related research, and conducts health services research.

FINDINGS:
The Health Care Management Center is specifically mandated by Public Law 93-353. Examples of policy-relevant research projects are: A study of hospitals' cooperation and competition, a methodology for projecting HMO enrollment, a methodology for allocating perinatal health services resources, factors influencing physician overutilization of laboratory tests, the management of dental care resources, and methods of improving the relationship between planning and control systems in health institutions.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS02975 CATEGORY: HEALTH SERVICES RESEARCH CENTERS - HEALTH SERVICES RESEARCH CENTERS

TITLE: Health Services Policy Analysis Center

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
11-01-77	10-31-82	505,534	1,825,164	2,468,497	LEE, PHILLIP R UNIVERSITY OF CALIFORNIA SAN FRANCISCO SAN FRANCISCO CALIFORNIA 94143

OBJECTIVE:
The Policy Analysis Center is organized to provide assistance to health policymakers at the Federal level in a manner which brings the results of health services research to bear on specific policy questions. The Center focuses on the development and evaluation of national policies relating to health services, including the development of health maintenance organizations and other forms of group practice, with a view toward improving the efficiency of the health care delivery system.

APPROACH:
The Center is awarded funds to support both its administrative costs and the costs of specific projects. Its scope of effort is national rather than local, and its program of technical assistance involves the use of a Washington, D.C. office as well as the base office at UCSF. Dissemination of findings is through solicited technical assistance efforts and through Congressional testimony, publications in refereed journals, conferences, and the mass media.

FINDINGS:
The Center is mandated by HMO amendments to NCHSR legislation (P.L. 93-353 as amended by P.L. 94-460). It is expected that the Center will bring research more directly to bear on Congressional initiatives in health, and specifically in the area of health maintenance organizations. Areas of Congressional advice include e.g., prescription drugs, health manpower, regulation and planning, medical technology, long term care of the elderly, health microeconomics, and health maintenance organizations.

RECORD NO. HS03760 CATEGORY: LONG TERM CARE - COMPREHENSIVE SERVICES PLANNING

TITLE: A Data Archive for Use in Long-Term Care Policy Analysis

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	11-30-81	156,266	308,642	308,642	KATZ, SIDNEY MICHIGAN STATE UNIVERSITY EAST LANSING MICHIGAN 48824

OBJECTIVE:
To develop a unique type of archive of long-term care information and test its utility in selected policy analysis; a concomitant objective is to contribute to methodologic improvement of data archiving and secondary analysis.

APPROACH:
The project will acquire selected data sets from completed long term care studies; evaluate the suitability of the data for the archive; index and transform the data to make it compatible with other data. A unique requirement for inclusion of the data set is that it must describe 1)the needs of populations in terms of their health status; 2)amounts of changes in health during given periods of time; 3) impacts of services. Five data sets have already been screened as suitable and seven more are under consideration. It is suggested that perhaps 30 or 40 studies will be eventually analyzed. Six interlocking goals have been outlined with the methodology for attaining them: 1) refine information in the archive; 2) refine procedures for identifying priority policy issues and analysis questions; 3) refine supports for implementation of policy analysis; 4) demonstrate use of the archive in policy analyses; 5) conduct secondary studies of program evaluation; 6)develop background information useful in formulating analytic plans for policy studies. A plan for external evaluation of the products will be implemented.

FINDINGS:
Significant products of this project will be its technical contributions to knowledge about archiving and integrating multiple sets of time-series data in the long term care field, as well as the process of secondary analysis of such data for policy evaluation purposes. The project will provide an improved base of information available for the continuous development and implementation of public directions in long-term care--contributing to decisions about long-term care needs and about cost-effectiveness. The data archive will be in place and will contain carefully selected long-term care studies and a data base ready for secondary analysis. Such data will also be accessible to other policy researchers and analysts. Analytic models which have been developed, used, and refined will be ready for direct application. The analytic models will represent logical and improved extensions of current approaches in the study and analysis of information. Preliminary policy position papers will have been developed, including findings of policy analysis studies relative to improved approaches for quality assurance, improved information for health planning guidelines, and the organization of long-term care.

RECORD NO. HS03815 CATEGORY: LONG TERM CARE - COMPREHENSIVE SERVICES PLANNING

TITLE: Panel Study of Massachusetts Elders-Wave III

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
08-01-80	07-31-82	206,905	206,905	389,271	BRANCH, LAURENCE G HARVARD UNIVERSITY BOSTON CAMPUSES BOSTON MASSACHUSETTS 02115

OBJECTIVE:
To conduct a third wave of a longitudinal panel study of the health care and social service needs of noninstitutionalized elders in Massachusetts.

APPROACH:
A statewide area probability study of 1625 people over age 65 responded in the first wave in 1975, 1,317 responded in the second wave 15 months later and during the current wave 825 respondents were interviewed. The field work has been completed within the scheduled time frames and earlier respondents accounted for. The data instrument consists of questions on the second wave plus new questions on knowledge of and use of services. Measures of change over time and variables will be displayed and cross-tabulations according to demographic variables, perceived health status and number of unmet needs will be included in the analysis. The proposal includes the development of an index of dependence - independence and an index of frailty. Additional items include bereavement data and plans for developing vulnerability and risk rations.

FINDINGS:
During year 02, analysis of the Wave III data will be conducted in three phases: analysis of the prevalence findings from Wave III interviews yielding a descriptive monograph; analysis of merged data from Waves I-II and III to examine changes in level of disability; integration and synthesis of the findings to identify factors that influence the direction and magnitude of the correlation between disability and impairment.

RECORD NO. HS03824 CATEGORY: LONG TERM CARE - COMPREHENSIVE SERVICES PLANNING

TITLE: Health Care Services Utilization Among Older Americans

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	02-28-81	0	35,252	35,252	EVE, SUSAN B NORTH TEXAS STATE UNIVERSITY DENTON TEXAS 76203

OBJECTIVE:
To identify those demographic, social, and economic factors which affect the use of health care services by older adults. A particular focus of this research is to assess the applicability of the Anderson and Newman Model, developed in 1973, to predict the use of health care services according to specific characteristics of any given population.

APPROACH:
The data set used for this secondary analysis research project was the 1975 National Health Interview Survey conducted by the National Center for Health Statistics. The national probability sample of the non-institutionalized population of the U.S. included 11,687 persons 65 years of age or older, of which 226 were members of Health Maintenance Organizations (HMO). Path analysis, a multiple regression procedure, was the major data analysis technique used. The effects of predisposing, enabling, and illness variables on the use of physicians, hospitals, and dentists in the population of individuals 65 years and older were examined, as well as within the categories of the young-old (65-75 years), the middle old (75-84 years), and the old-old (85 years of age or older).

FINDINGS:
Among the total population 65 years of age and older, use of physicians and hospitals was influenced most strongly by the illness-morbidity variables while use of dentists was influenced most strongly by income and education. The illness variables also most strongly affected physician utilization among the young-old and middle-old, while among the old-old private health insurances had a positive effect. The predictors of hospital utilization did not vary among the three age groups. Comparison of the HMO and non-HMO groups revealed that the HMO members were younger, were more likely to be married, had higher levels of education and income, were more likely to have private health insurance, and subjectively rated their health. While HMO members tended to have more frequent physicians' visits than the non-members, the two groups did not differ in their number of hospitalized days or hospital episodes. In the HMO population, use of physician's services was positively influenced by poor health, education and residence in a Standard Metropolitan Statistical Area (SMSA) while hospital utilization was affected solely by poor health.

RECORD NO. HS04042 CATEGORY: LONG TERM CARE - COMPREHENSIVE SERVICES PLANNING

TITLE: Correlates of LTC Expenditures and Service Utilization

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-80	09-29-84	75,004	75,004	726,017	ESTES, CARROLL L UNIVERSITY OF CALIFORNIA SAN FRANCISCO 3RD AND PARNASSUS AVE SAN FRANCISCO CALIFORNIA 94143

OBJECTIVE:
To provide an inventory of state policies relative to Federal long term care programs. To assess the effect of these policies on the availability, utilization and public cost of LTC services; and to develop a context within which state and Federal policy choices concerning LTC can be examined. The study will cover programs of the Older Americans Act; Titles XVI, XVIII, XIX and XX of the Social Security Act; and Certificate of Need Regulations.

APPROACH:
There are two major components to the design. First a range of data on the fifty states will be compiled from secondary publications such as Census and standardized reporting systems for each of the above noted programs. These data will cover the period FY 1978-82 and will be the basis for tabulating expenditure and utilization measures. State documents and plans for these same years will be used to develop policy profiles. Other secondary measures will be used as preconditioning or control variables. The second component involves interviews directed to a specified list of LTC cost containment and quality control strategies. Respondents (maximum of 4 per state) will be asked to identify the most important policy/regulation developments concerning these issues; and to describe the major influences on expenditure/utilization.

FINDINGS:
Significant products of this project will be a 50 state, time series data base development in the LTC field; and its application in a series of policy effect models. The analysis will attempt to provide practical indicators of state policy effects and their relationship to different state conditions and characteristics. These efforts will improve upon information on LTC policy outcome trends now available to Federal and state policy makers. It will also be useful to those responsible for developing and maintaining health and social service data systems.

RECORD NO. 23379300205 CATEGORY: LONG TERM CARE - COMPREHENSIVE SERVICES PLANNING

TITLE: Synthesis of State Long-Term Care Policies

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-25-80	01-02-81	98,041	98,041	98,041	VALIANTE, JOHN D ICF INCORPORATED 1850 K STREET, NW WASHINGTON DISTRICT OF COLUMBIA 20006

OBJECTIVE:
Describe long-term care policies in 28 SMSAs. Policies include Medicaid reimbursement rates for nursing homes, Medicaid eligibility standards, scope of Title XX coverage, certificate of need regulation and other policies that affect nursing home bed supply and use.

APPROACH:
Using selection strata provided, select SMSAs in 18 states which represent substantial policy variations among all states. Contact state sources to identify sources of data prescribing policies, expenditures, utilization, etc. Synthesize data and prepare data tapes for analysis by government researchers.

FINDINGS:
SMSAs vary widely in the type and amount of long-term care services available to the elderly. State and local policies, including scope of benefits, eligibility levels and reimbursement levels, are generally consistent in promoting or constraining the supply of institutional services. Few states, however, have coordinated policies toward noninstitutional care services, either to substitute for institutional care or as a segment of a continuum of long-term care services.

RECORD NO. 233793020 CATEGORY: LONG TERM CARE - COMPREHENSIVE SERVICES PLANNING

TITLE: Review and Analysis of Factors Influencing the Deinstitutionalization of the Mentally Ill

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	03-29-81	0	225,344	225,344	CICCHINELLI, LOUIS UNIVERSITY OF DENVER DENVER COLORADO 80208

OBJECTIVE:
To review and evaluate studies and data on the care and services provided to the deinstitutionalized chronically mentally ill; to develop a descriptive model of the deinstitutionalization process and to suggest a research agenda to fill gaps in existing studies.

APPROACH:
This research will develop a state of the art information base on the deinstitutionalization of the mentally ill to community based facilities by reviewing the epidemiology of this population, the appropriateness of placement, the quality of care provided in mental hospitals, nursing homes, and other settings, the relative costs of treatment, and the effect of funding on placement and quality of care. Emphasis is on beneficiaries of Medicare, Medicaid, and Federal and state-supported programs with special reference to nursing home residents. Information sources include available and ongoing studies of deinstitutionalization, analysis of existing national, state and local sources as well as discussion with experts on long term care alternatives and programs for the mentally ill. The deinstitutionalization system model to be developed will integrate the effects of reimbursement, political, and legal factors on placement and supply of facilities as well as on the appropriateness of care received in alternative facilites.

FINDINGS:
Nursing homes are widely used as a resource for the mentally ill with the growth of deinstitutionalization away from State mental hospitals over the last twenty years. There is increasing evidence that the goal of deinstitutionalization to provide community-based care meeting the psychosocial needs of the mentally ill is not being met in nursing homes. Analysis of the 1977 National Nursing Home Survey found that of 1.3 million residents, approximately 60.6 percent had one or more mental impairments or conditions. Mentally ill residents in nursing homes are different from physically ill; they are younger, less able to communicate and exhibit more behavior problems both nationally and in the five States of analysis: California, Illinois, Massachusetts, New York, and Texas. Mentally ill residents in nursing homes have greater lengths of stay and remain in the health system longer than physically ill residents. Analysis of State studies reveal inadequate staff training, and few programs addressing the mental health services needs of nursing home residents. There is need for additional research on patient outcomes in order to adequately assess appropriateness of placement of mentally ill in nursing homes.

RECORD NO. HS03275 CATEGORY: LONG TERM CARE - INSTITUTIONAL SERVICES

TITLE: Prognosing the Course of Nursing Home Patients

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	01-31-82	313,731	663,702	663,702	KANE, ROBERT L RAND CORPORATION 1700 MAIN ST SANTA MONICA CALIFORNIA 90406

OBJECTIVE:
To develop and test a means of predicting the expected course of illness of nursing home patients and expected health outcome based upon initial and periodic assessment of patient health status. It will test the strategy by which the assessment data at one time is used to predict the status at another point in time.

APPROACH:
The study will utilize a series of repeated observations by a multi-disciplinary team comprising physician, nurse, and social worker on approximately 500 patients drawn from five nursing homes.
The team will gather data and develop prognoses on each patient as to the level of functioning they expect to find in the patient three months hence, and compare these to actual patient outcomes. The prognostic process involving the complex physiological, and social factors inherent in nursing home patients will be modeled mathematically, fitting subjective judgements with objectively collected data. The evaluation three months later checks the accuracy of the prior prognosis and becomes the baseline for a new prognosis for the next three months. Clues derived from one iteration will be tested in subsequent rounds. Finally, a unidimensional scale of outcome predictors will be developed from the multiple components of outcomes identified in the process.

FINDINGS:
This study could lead to better understanding of the complex mix of health and social impairments of the chronically ill in nursing homes, particularly the aging. It could open the way for developing a system for reimbursement on the basis of achieving predicted outcomes; it could provide a basis for comparing various forms of long-term care in the absence of more rigorous randomized trials; it could offer a rare set of longitudinal data on a corps of nursing home patients, yielding useful information about what types of change over time one might realistically expect.

RECORD NO. HS03898 CATEGORY: LONG TERM CARE - INSTITUTIONAL SERVICES

TITLE: Drug Prescribing & Evaluations by Pharmacists in SNFs

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-01-80	01-31-82	85,938	85,938	189,288	THOMPSON, JOHN F UNIVERSITY OF SOUTHERN CALIFORNIA UNIVERSITY PARK LOS ANGELES CALIFORNIA 90007

OBJECTIVE:
To evaluate the practice, outcome, costs and benefits of employing pharmacists to prescribe and monitor patient drug therapy in Skilled Nursing Facilities.

APPROACH:
The study focuses on two pharmaceutical delivery systems with an initial intake of 300 patients within six nursing homes who are cared for by nine physicians. The patients will be randomly assigned to two contrast groups. 1) The control group--patients continuing to receive care and prescriptions from the SNF physicians; and 2) the experimental group, patients receiving prescription medication written by the pharmacist. The analysis will focus on outcome measures, e.g. adverse drug reactions, no. of drug--drug interactions, and average number of prescriptions, costs benefit/cost effectiveness implications of treatment, etc. (Calif. Assemby Bill 717, approved in Sept. 1977 allows pharmacists to prescribe drugs when engaged in an experimental health manpower project authorized by the California State Department of Health.)

FINDINGS:
The process and outcome measures derived from this study will be utilized to compare the ability of this experiment to reduce the incidence of inappropriate therapy, reduce the incidence of adverse drug reactions, reduce the use of unnecessarily costly drug products and improve the quality of patient care and drug therapy in Skilled Nursing Facilities. In addition, the study will test the expanded role of the pharmacist in an experimental setting.

RECORD NO. HS03030 CATEGORY: LONG TERM CARE - HOME AND COMMUNITY SERVICES

TITLE: Randomized Trial of a New Team Approach to Home Care

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-79	06-30-82	143,612	281,425	460,324	GROTH-JUNCKER, ANNEMARIE UNIVERSITY OF ROCHESTER RIVER CAMPUS STA ROCHESTER NEW YORK 14627

OBJECTIVE:
To evaluate the impact of a newly developed physician-nurse practitioner-social worker team approach to home care for patients with chronic or terminal illness who wish to receive care at home rather than in an institution.

APPROACH:
Project is based in the Ambulatory Care Unit of the Department of Medicine, University of Rochester Medical Center and works closely with the Visiting Nurse Association of Monroe County. The program includes 24-hour telephone service by team members and home visits by the physician, as required; and emphasizes supportive care by family and friends. Patients who meet the intake criteria including informed consent will be stratified into two strata: cancer and non-cancer patients each of which will be randomly allocated to experimental and control groups. Both groups will receive the usual range of community services. Data on approximately 240 patients will be collected at three month intervals by trained non-health professional surveyors not involved with the service program. The research will be kept separate from the service program. The data analysis will include comparisons of service utilization and costs of services. Analysis will also include comparisons of patient morale and functional status as well as both patient and family satisfaction with medical care.

FINDINGS:
The major significance of the project is the evaluation of a Team Approach to Primary Care in the Home as an alternative for terminally or chronically ill and homebound patients who wish to remain in their homes. The expected outcome will be reduced cost for care through a reduction in emergency room evaluations and hastily arranged for, often inappropriate acute care hospital admissions, better psychosocial functioning at home with good support services, more satisfaction with care at this critical phase of life, and longer or equal survival time as compared to receiving conventional care at home or in an institution. This project will have additional methodologic contributions to make. It will describe the relationship of changes over time in the Sickness Impact Profile (SIP) with changes over time in morale and satisfaction. It will also compare patient and surrogate SIP scores for a sub-sample of patients. Development of the satisfaction and bereavement instruments will be important with upcoming emphasis on evaluation of long-term and terminal care. A work sampling study of the Team will describe and define the intervention so that Teams can be replicated. Indirectly, this project demonstrates a variation of hospice type care.

RECORD NO. HS03312 CATEGORY: LONG TERM CARE - HOME AND COMMUNITY SERVICES

TITLE: Cost and Efficacy of Home Care for COPD Patients

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-79	05-31-83	318,435	494,661	921,384	BERGNER, MARILYN UNIVERSITY OF WASHINGTON SEATTLE WASHINGTON 98195

OBJECTIVE:
To conduct a randomized control trial to test whether home health care is a cost-effective alternative to combinations of out-patient and institutional care.

APPROACH:
Approximately 420 patients with chronic obstructive pulmonary disease (COPD), stratified by severity of disease, will be randomly assigned to one of three groups: (1) special home care by visiting nurses trained in the management of COPD patients; (2) regular home care by visiting nurses with only general training; (3) no home care services. Comparisons will be made between the three groups on costs and efficacy of care. An analysis of changes in disease severity and behavioral functioning due to the treatment by the home care nurses of these two types will be carried out. The approach will permit comparisons of all costs associated with the three groups. Data sources include visiting nurse visits, measurements at entry, after 6 months and at exit from the study (including the levels of health determined by the Sickness Impact Profile), physician, hospital and other sources.

FINDINGS:
This research examines treatment modalities that have the potential of reducing costs of care for a substantial patient population, COPD sufferers. It has been estimated that 15 million Americans have this disease. Hospital treatment for the disease produces a large amount of costs. The substitution of a less expensive home care alternative is clearly desirable if it can be shown that patients receive at least comparable care and are able to function as least as well.

RECORD NO. HS03750 CATEGORY: PLANNING AND REGULATION - EVALUATION OF REGULATORY PROGRAMS

TITLE: Regulation on the Adoption and Diffusion of CT Technology

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-81	88,098	166,084	166,084	BICE, THOMAS W UNIVERSITY OF WASHINGTON SEATTLE WASHINGTON 98195

OBJECTIVE:
To study the impact of government regulations on the diffusion and adoption of Computed Tomography (CT) technology.

APPROACH:
Data from a 1973-78 census of CT scanners carried out by the Office of Technology Assessment and information from other secondary data sources will be analyzed to test different hypotheses on the likely impact of regulations on: (1) types of hospitals that adopted CT technology; (2) the timing of their adoption; (3) the rate of diffusion among states and Health Systems Agencies, and (4) the extent to which CT scanners were acquired by institutions or persons other than hospitals. The analysis will include estimates of the diffusion curve for classes of hospitals, the saturation level in market areas, the effect of capital expenditures/services (CES) controls and regulatory intensity on eventual level of scanner adoption, the effect of CES controls on the rate of diffusion of scanners, and the effect of CES controls on the proportion of scanners located outside hospitals. Various forms of logistic models will be used for mathematical representation of the diffusion process.

FINDINGS:
This study addresses matters pertaining to sources of variations in the effectiveness of regulation among health service areas. The variable "regulatory intensity" is viewed as a plausible operational indicator of hospital's regulatory environments that can be used to capture the cost containment fervor within a medical service area.

RECORD NO. HS03238 CATEGORY: PLANNING AND REGULATION - PLANNING TECHNIQUES

TITLE: Medical Technology Adoption Decision in Hospitals

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	01-30-82	111,502	219,746	219,746	GREER, ANN L UNIVERSITY OF WISCONSIN MILWAUKEE MILWAUKEE WISCONSIN 53201

OBJECTIVE:
To investigate the process through which decisions to adopt or not adopt (including failure to consider adoption) selected hospital based medical technologies are made, and to develop detailed models of this process.

APPROACH:
Ten technical innovations will be selected and paired with 25 general acute care hospitals in the southeastern Wisconsin Health Services Area. Instruments to guide focused interviews will be developed for each of three major categories of interviewees: physicians, board members and administrators. A total of 473 interviews will be conducted with respondents from the above categories and other officials in related health organizations and agencies. Coding schemes will be developed based upon preliminary analysis of the interview data. Analytic induction, a technique which provides for the conceptual emergence of new relationships inherent in qualitative data while simulataneously providing clear rigor to analyses and presentation of findings, will be used to maintain continuous interplay between data and conceptual formulation.

FINDINGS:
The study will produce detailed models of the hospital adoption process which can then be empirically tested using more structured methodologies. Such knowledge would allow Federal policy-makers to better understand the forces and motivations which govern the adoption of medical technology in hospitals and thereby to develop properly focused and more effective incentive and regulatory mechanisms.

RECORD NO. HS02932 CATEGORY: PLANNING AND REGULATION - THE PROCESS AND POLITICS OF PLANNING

TITLE: The Politics of Health Care Regulation

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-78	04-30-81	0	101,781	101,781	BROWN, LAWRENCE D BROOKINGS INSTITUTION 1775 MASSACHUSETTS AVE NW WASHINGTON DISTRICT OF COLUMBIA 20036

OBJECTIVE:
To examine the structure, goals, strategies and interorganizational relations of selected regulatory programs (Professional Standards Review Organizations; Certificate-of-Need; rate-setting; and planning by Health Systems Agencies).

APPROACH:
The study will examine the workings of the four major regulatory programs in two localities in each of four states. A case study approach is used. The sampling strategy is to select two states well endowed with high quality health care resources, where the major concern is restraining extravagance, and two states that are underserved, where the concern is improving quality and access. Within each of the four states, two areas will be chosen for study--one well served and one underserved. In each of the eight sites, the operation of regulatory agencies will be examined by focusing on three outcomes--one having to do with acquisition of resources (a question of regulatory efficiency), one having to do with distribution of resources among social classes, geographical areas, or categories of the sick (an issue of regulatory equity), and one outcome regarding coordination (a matter of regulatory effectiveness). Analysis will center on the structure of regulatory organizations, the definition of organizational goals and procedures, the strategies the organization pursues, and its coordination with other organizations.

FINDINGS:
A description of the strengths and weaknesses of current regulatory efforts will assist policy makers in discussion concerning possible (a) continuation and refinement of current policies; (b) greater centralization of Federal regulation and a larger Federal role; or (c) abandonment of public regulation in favor of improving market processes and private sector incentives.

RECORD NO. HS03755 CATEGORY: PLANNING AND REGULATION - THE PROCESS AND POLITICS OF PLANNING

TITLE: Legal Issues in Hospital Planning Decisions

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-79	08-31-81	0	112,859	120,775	WEINER, STEPHEN M BOSTON UNIVERSITY 881 COMMONWEALTH AVE BOSTON MASSACHUSETTS 02215

OBJECTIVE:
To identify and analyze legal issues arising from efforts of hospitals to merge, consolidate services, close or convert services, or close institutions.

APPROACH:
An analysis of existing and available materials relating to multi-institutional arrangements, conversions and closures will be made to identify legal issues that emerged and determine how they were handled. The research will be conducted primarily in Massachusetts, a state which has experienced the closure of sixteen hospitals and a reduction of 46 percent in obstetric services since 1967. Three areas of legal concern will be emphasized: fiduciary responsibility, institutional constraints, and the role of external regulatory programs. The issues identified will be categorized and analyzed to obtain specific understanding of their principles and implications and to provide recommendations with respect to their relative significance.

FINDINGS:
This research is expected to provide hospital boards and planning and regulatory agencies with a specification of the legal obstacles that may be encountered in making decisions relevant to multi-institutional arrangements, conversions and closures, and form the basis for developing strategies to deal with these obstacles at the outset.

RECORD NO. HS04089 CATEGORY: PLANNING AND REGULATION - INDUSTRY ANALYSIS

TITLE: Competition Studies in Health Services

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-80	09-29-83	99,981	99,981	299,884	HAVIGHURST, CLARK C DUKE UNIVERSITY DURHAM NORTH CAROLINA 27706

OBJECTIVE:
To express the idea of competition in the health services industry. This includes a statement of the limitations of the competition strategy, as well as detailing the technical complexities confronted in implementing it through antitrust enforcement, regulatory changes, and legislation.

APPROACH:
Procompetitive policy proposals are being given more precision, and efforts are being made toward paving the way for a smooth transition to a system in which competition will be relied upon more heavily than regulation to guide industry performance and development. This involves direct participation in the policy debate as well as in publishing articles.

FINDINGS:
An interim report examining the legal status of professionally controlled Individual Practice Associations (IPAs) has substantial significance for the Federal Trade Commission's efforts with respect to professionally controlled Blue Shield and other prepayment health plans. Another article discusses the extent to which ineligibility for reimbursement by third-party payers limits the competitive opportunities of allied health professionals and considers whether the antitrust laws do or should provide a remedy. Three published articles discuss the significance of the procompetition language Congress included in the National Health Planning and Resources Development Amendments of 1979: Havighurst, "Prospects for Competition under Health Planning-cum-Regulation," in M. Pauly, ed, National Health Insurance: What Now, What Later, What Never?, 329-59, American Enterprise Institute,1980: Havighurst and Hackbarth, "Competition and Health Care: Planning for Deregulation" Regulation, 39-48, May/June, 1980; Havighurst, "Health Planning for Deregulation; Implementing the 1979 Amendments," Law and Contemporary Problems, 33-76. 1981.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS04275 CATEGORY: PLANNING AND REGULATION - INDUSTRY ANALYSIS

TITLE: Assessing State Health and Human Services Integration

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-80	10-31-81	50,285	50,285	50,285	FRUMKIN, MICHAEL L FLORIDA STATE UNIVERSITY TALLAHASSEE FLORIDA 32306

OBJECTIVE:
To develop a research framework to investigate the precursors, substance, and impact on health service delivery of the reorganization of the Florida Department of Health and Rehabilitative Services. This reorganization aimed at integrating distinct uncoordinated services into a single delivery system which was geographically decentralized by district, to provide for greater responsiveness in decision making at the local level.

APPROACH:
Six integrated tasks will be performed in developing the research framework.These tasks will focus on four sets of variables. The first set of variables pertains to clients demand for, and response to services, the second to delivery of services by the organization, the third to the organization's structure, and fourth to demands from,and control exercised, by political components of the organizations environment. The first task consists of gathering preliminary data to describe organizational structure and process. Two districts will be sampled with administrators, service workers and clients surveyed.For task 2, a provisional matrix of the decision elements for each level of the organization, and clients will be developed. The extent of actual service integration and decentralization will be tentatively assessed in task 3. Tasks 4 & 5 consist of conceptualizing appropriate variables and their significant relationships and developing detailed hypotheses based on them. Sources of data concerning the significant variables will be identified and examined in the final task.

FINDINGS:
It is expected that this exploratory research will provide a framework for assessing the viability of the reorganized Florida Department of Health and Rehabilitative Services in terms of the impact that organizational change and the attendant political climate have had on actual delivery of services to clients and on the clients themselves. As a result of this research, instruments will be designed and review procedures established for collection of data on variables determined to be significant. These will then be used in an initial data collection phase of an overall assessment of the Florida reorganization. This overall assessment of the Florida reorganization has widespread national interest. Many other state governments have observed the developments in Florida and considered the prospect of implementing, in whole or in part, this new model of human services organization.

RECORD NO. 233793011 CATEGORY: PLANNING AND REGULATION - INDUSTRY ANALYSIS

TITLE: A Profile of the Medical Technology Industry and Governmental Policies

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-28-79	06-30-81	0	201,715	201,715	WENCHEL, H ELIZABETH YOUNG, ARTHUR & COMPANY 1025 CONNECTICUT AVENUE WASHINGTON DISTRICT OF COLUMBIA 20036

OBJECTIVE:
To develop a comprehensive profile of the structure of the medical technology equipment industry, and to identify and describe existing governmental policies and their effect on the research, development, and marketing strategies of the industry.

APPROACH:
The data elements required to construct a comprehensive profile of the industry will be identified and a categorization scheme developed. Existing secondary data sources will be identified, their availability, completeness, and reliability determined, and appropriate data collected and arrayed. Federal, State and local policies and regulations that bear on the production and use of medical devices and instruments will also be identified and described. Subsequent analyses, which will incorporate the use of case study techniques, will be conducted to determine their effect or potential impact on research, development, manufacturing, marketing, and utilization of medical equipment/technology.

FINDINGS:
This research produced a three-part report profiling the medical technology industry using an industrial organization (I.O.) economics approach and secondary data sources. Volume I provides an in-depth description of the industry in terms of structure (concentration, barriers to entry, etc.); conduct (decision-making processes related to price, output, etc.); and performance (new patents, profits, etc.). In Volume II, the I.O. approach is applied in a case study of the effects of Medicare/Medicaid reimbursement and the 1976 Medical Device Amendments on the pacemaker industry. Appendix A provides an analysis of the adequacy and availability of the various aggregated, firm specific, and specialized data bases. Collectively the documents contribute to the identification of influences affecting innovation and the description of what has happened to firms entering or exiting the market and factors associated with survival. The limitations of using existing secondary data sources for such analyses are discussed in detail.

RECORD NO. 233803004 CATEGORY: PLANNING AND REGULATION - INDUSTRY ANALYSIS

TITLE: Organizational Structure of HMOs

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
08-29-80	08-31-81	109,132	109,132	109,132	BLANDFORD, WILLIAM SYSTEMETRICS, INC 222 E ANAPAMER STREET SANTA BARBARA CALIFORNIA 93101

OBJECTIVE:
To establish an inventory of organizational characteristics of all HMOs, and to study the impact of organizational differences on organizational effectiveness measured by growth, quality, utilization, costs and attitudes.

APPROACH:
The first phase of the study involves a questionnaire survey of all HMOs in the United States which were in operation as of July 1, 1979 and continue in operation at the time of the survey (N=204). In this phase, organizational information is collected on four dimensions of structure (plan-physician and plan-hospital relationships, physician reimbursement and physician organization) to classify all HMOs. A stratified sample (N=64) representing all types is then followed up with field interviews with heads of major divisions in each HMO, and questionnaires to samples of providers and administrative staff. Analytic approach includes cross-validation of responses from the inventory questionnaire to the field site data, in addition to triangulation within instruments; analysis includes descriptive statistics on the performance of types, as well as explanatory statistics on the relationships between organizational characteristics and each performance measure.

FINDINGS:
It is expected that different organizational arrangements in HMOs will lead to a different mix of performance effectiveness. For instance, while the staff model of HMOs will likely result in the tightest controls over costs and quality, it is hypothesized that more loosely structured HMOs (IPAs and group models) will have greater growth potential and lead to greater productivity and satisfaction among physicians. In addition, it is expected that the more closely the HMO model approximates the current predominant free-enterprise system, the more it will enjoy widespread acceptance among the American public.

RECORD NO. HS03087 CATEGORY: QUALITY OF CARE - MONITORING TECHNIQUES

TITLE: Ambulatory Care Medical Audit Demonstration Project

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-78	09-29-82	421,311	990,256	1,490,714	PALMER, R HEATHER HARVARD UNIVERSITY 677 HUNTINGTON AVENUE BOSTON MASSACHUSETTS 02115

OBJECTIVE:
To demonstrate the feasibility of medical record audit using explicit process criteria across multiple ambulatory care sites as an effective and efficient quality assurance system.

APPROACH:
The project is being conducted in eleven ambulatory care sites (four teaching hospitals and seven neighborhood health centers). An assessment will be made of the effectiveness of a cyclic quality assurance program which employs information feedback in an effort to change provider behavior toward compliance with criteria. A controlled experimental trial will be used to evaluate the effectiveness of the feedback loop and providers will be assigned a priori to experimental or control status for one or two sets of audit topics. Interventions being studied include: announcement of audit topic, adoption of criteria, feedback of audit results, administrative changes, and lapse of time without further intervention. Detailed cost diaries are maintained in order to assess direct costs of the routine use of this mode of audit and efforts will be made to estimate indirect and intangible costs.

FINDINGS:
The intent of this study is to test the feasibility and effectiveness of an accepted mode of quality assurance and the results will be useful to both health policy makers and provider groups. If the system proves successful, it can be promoted and tested over a wider base; however, if not successful, it should provide a warning to policy makers before wide-scale implementation under PSRO. Progress to date includes the selection and acceptance of nine audit topics, development and adoption of criteria, strengthening of audit interventions, documentation of provider reactions to audit, and initiation of two audit cycles staggered in time. No study results are presently available.

RECORD NO. HS03115 CATEGORY: QUALITY OF CARE - MONITORING TECHNIQUES

TITLE: Improving Clinical Decision Making in Arthritis

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
08-01-78	02-28-82	157,200	435,071	435,071

INVESTIGATOR NAME AND ADDRESS

LEVY, JOSHUA
UNIVERSITY OF CALIFORNIA LOS ANGELES
405 HILGARD AVE
LOS ANGELES
CALIFORNIA 90024

OBJECTIVE:
To develop a computer based diagnostic system for arthritis (ADS), for aiding physicians to improve clinical diagnostic accuracy and improving the cost effectiveness of diagnostic evaluation of patients with arthritic disorders.

APPROACH:
The knowledge base currently consists of prior probabilities obtained from a data base and conditional probabilities of 187 features of 14 disorders obtained subjectively from rheumatology experts. The P.I. has designed, implemented, and tested algorithms for information acquisition and update of disorder probability. A four part questionnaire has been developed for better understanding the process of clinical decision making in arthritis and to develop a broad base for subjective input of feature sensitivity and specificity. Methods are being developed for validating the algorithms, determining a non-parametric approach for determining the most valuable clinical variables, mathematical aggregation approaches for the subjective estimates of the conditional probabilities, and for evaluating the ability of the system to teach and improve overall risk and cost-effectiveness of physicians in selecting tests and procedures.

FINDINGS:
The successful implementation of algorithms to more accurately and efficiently define correct diagnoses and allow clinicians to determine the optimal path towards evaluation and confirmation of a diagnostic hypothesis would clearly have a significant impact on quality of care as well as decreasing the cost of diagnostic workup. The computer programs to test these hypotheses in arthritic disorders are to be quite general and hopefully extrapolated to other disease specialties.

RECORD NO. HS03295 CATEGORY: QUALITY OF CARE - MONITORING TECHNIQUES

TITLE: Influence of Continuing Medical Education on Medical Audit

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	12-31-81	150,641	301,660	317,847	BUNKER, JOHN P STANFORD UNIVERSITY STANFORD CALIFORNIA 94305

OBJECTIVE:
To examine empirically the importance of the insufficiency of scientific evidence underlying decisions and the inadequacy of chart information for the purpose of evaluating these decisions. This is a revision of the original objective: to teach physicians in community hospitals to use better criteria in evaluating patient care. The revised approach reflects this change.

APPROACH:
Medical audits on hysterectomies, allopurinol usage, and acute asthma in children will be limited to the Stanford University Hospital. Empirical criteria will be developed and compared with criteria used by the Stanford staff in medical audits.

FINDINGS:
The science based criteria and the control criteria will be ranked according to medical significance, and based on these two assessments of significance, the importance of each criterion will be characterized.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS04072 CATEGORY: QUALITY OF CARE - HEALTH STATUS

TITLE: A Trial of Team Care in the Treatment of Acute Stroke

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
01-01-80	12-31-81	28,013	28,013	28,013	DAUPHINEE, SHARON L MC GILL UNIVERSITY BOX 6070 MONTREAL CANADA

OBJECTIVE:
To determine if coordinated, comprehensive, multidisciplinary (team) care provided to acute stroke patients achieves better patient outcomes than the current traditional care.

APPROACH:
A randomized controlled trial will be initiated on the acute stroke patients to determine the effects of a coordinated multidisciplinary "team" approach to care superimposed on the "traditional" pattern of care. After following an initial group of 50-60 stroke patients already in the hospital, for four months, approximately 120 new patients will be randomly assigned to a "traditional" care group or a "team" care group for an eight month period. Initial and follow-up evaluations will permit comparisons across groups with reference to the care process and patient outcomes.

FINDINGS:
The anticipated results of this study are that patients receiving "team" care have greater early recovery response of the affected side as reflected in the change in motor performance scores, than patients receiving "traditional" care. Patients receiving "team" care have an earlier return of functional abilities, as reflected in the change in the activities of daily living (ADL) and mobility scores, than patients receiving "traditional" care. A decrease in in-house fatality should occur.

RECORD NO. HS04244 CATEGORY: QUALITY OF CARE - HEALTH STATUS

TITLE: Stress and the Amish Community in Transition

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-01-80	08-31-82	24,069	24,069	24,069

INVESTIGATOR NAME AND ADDRESS

MEYERS, THOMAS J
BOSTON UNIVERSITY
100 CUMMINGTON STREET
BOSTON
MASSACHUSETTS 02215

OBJECTIVE:
To examine the psychosocial and physiological consequences of stress, associated with the transition from agriculture to industry, on Amish men in two communities in Northern Indiana.

APPROACH:
Data will be gathered by: participant observation; structured interviews; and questionnaire. The sample includes 104 farmers and 110 factory workers selected from twelve of fifty-three Amish Church districts based on their approximately equal distribution of Amish men working in farming and industry. The dependent variable is stress, while the independent variables are strain, social support and coping skills. The principal investigator will spend several months as a participant observer in the Amish community prior to beginning formal interviewing. The interview will be pretested in an Amish Church District that is not part of the study sample.

FINDINGS:
This study is potentially a significant contribution to health care research for identifying available social support mechanisms in order for patients to utilize personal environmental resources to alleviate stress as opposed to relying solely upon health care professionals.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS03576 CATEGORY: QUALITY OF CARE - EVALUATION OF SYSTEM & ORGANIZATION PERFORMANCE

TITLE: Obstetrical Practice and Perinatal Outcome

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-30-81	0	43,920	43,920	GITTELSOHN, ALAN M JOHNS HOPKINS UNIVERSITY CHARLES AND 34TH STS BALTIMORE MARYLAND 21218

OBJECTIVE:
To organize natality data bases which will permit exploration of a series of questions pertaining to obstetrical practice and perinatal outcomes. From these data an attempt will be made to study trends in rates of neonatal mortality and morbidity and of obstetrical practices and processes, adjusted for relative risk.

APPROACH:
This effort will include a literature review of fetal monitoring, cesarean section, induction of labor, instrument delivery, and anesthesia use; the acquisition, documentation, and formatting of vital records and hospitalization files from 7 areas of the U.S. and aggregated data from Norway and England pertaining to births, infant deaths and obstetric practice for the period 1969-1977. These data cover a wide variety of demographic circumstances and a range of practice settings including high technology university centers, small community hospitals, birthing centers and home delivery. A variety of analytic techniques will be applied to the data to compute trends in obstetric practice and a variety of perinatal outcomes.

FINDINGS:
Over the past decade there have been marked alterations in obstetrical practice including increased use of fetal monitoring, induction techniques, and cesarean sections. A multitude of questions have been posed about the risks and benefits of these procedures. This research is expected to contribute to a resolution of the debate concerning high technology obstetric procedures and ultimately to policy concerning their reimbursement and standards for their appropriate use.

RECORD NO. HS03762 CATEGORY: QUALITY OF CARE - EVALUATION OF SYSTEM & ORGANIZATION PERFORMANCE

TITLE: Evaluation Study of an Alternative Birthing Center

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-81	128,560	256,948	256,948	BARUFFI, GIGLIOLA JOHNS HOPKINS UNIVERSITY CHARLES AND 34TH STS BALTIMORE MARYLAND 21218

OBJECTIVE:
To evaluate the outcomes of two different forms of pregnancy care comparing birth outcomes in a maternity center (out of hospital) with births in a tertiary care facility.

APPROACH:
Utilizing medical records to select a stratified random sample of 800 experimentals and a similar number of controls, the study will evaluate outcomes of pregnancy care rendered at two different birthing facilities in Philadelphia, PA. The study will compare outcomes at Booth Maternity Center and Thomas Jafferson Medical Center utilizing a previously developed and tested rating scale (Hobel's). The study will additionally seek to evaluate the medical risk of transfer from Booth Maternity Center to Thomas Jefferson University Medical Center in the event of pregnancy complication. Data will be analyzed using univariate and multivariate processes.

FINDINGS:
The study will address a major issue of quality of care delivered in two types of birthing facilities. Results may have implications for reimbursement under Title XIX.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS04237 CATEGORY: QUALITY OF CARE - EVALUATION OF SYSTEM & ORGANIZATION PERFORMANCE

TITLE: Hip Fracture Outcomes in Skilled Nursing Facilities

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-80	08-31-81	25,347	25,347	27,809	HIELEMA, FRANK J UNIVERSITY OF NORTH CAROLINA CHAPEL HILL NORTH CAROLINA 27514

OBJECTIVE:
To study the effects of variations of facilities qualities and the patient care provided on the physiological and psychological outcomes of patients with hip fractures in Skilled Nursing Facilities (SNF's).

APPROACH:
Two hundred and fifteen patients with fractured hips in fourteen SNF's will be followed up eight months post-fracture. The results of their care will be evaluated in relation to the facility's qualities (structure) as assessed on the Medicare (Title XVIII) survey report form and the therapeutic care provided (process) including the intensity and duration of nursing care, physical therapy and medical services and the effect on patient care (outcome). Five primary sources are being utilized to gather data to test the study hypothesis. These include patient records, survey report forms and individuals involved with the patient and his care. Two sets of hypotheses have been developed for this study; the first relates to the belief that the facility quality (structure) contributes to the recovery of hip fracture patients. The second is related to the importance of the variations in structure and process (care) provided on the outcomes.

FINDINGS:
The findings of this study will directly impact on the evaluation of the quality of care in nursing homes, an area of study in long-term care that is currently receiving careful scrutiny in terms of cost and effectiveness. The relationships between the nursing and physical therapy will be estimated using criteria that are currently being developed with a group of nurses and physical therapists. These criteria will include the potential care items that are considered essential in the care of hip fracture patients.

SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS04249 CATEGORY: QUALITY OF CARE - EVALUATION OF SYSTEM & ORGANIZATION PERFORMANCE

TITLE: Cost-Benefit Analysis of Heart Disease Research

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-80	06-30-81	19,472	19,472	19,472

INVESTIGATOR NAME AND ADDRESS

LUBECK, DEBORAH P
INDIVIDUAL AWARD--LUBECK, DEBORAH
624 WALNUT AVE
SANTA CRUZ
CALIFORNIA 95060

OBJECTIVE:
To assess the viability of cost-benefit analysis for decisions regarding cost-effective approaches used in treating heart disease, the equitable distribution of medical innovation, and the evaluation of the costs of life-saving technologies prior to therapeutic availability.

APPROACH:
Data on the costs of research and development, marketing and medical care related to the development of a clinically effective artificial heart will be compared with the costs of a nationwide education program to prevent heart disease. The data will be acquired from the National Heart, Lung and Blood Institute, the Department of Energy, the Stanford Heart Disease Prevention Program and a similar community-based study in Finland and will relate to potential as well as intangible costs and benefits. Benefits of the two research efforts will be evaluated in terms of increased life expectancy, medical costs averted, and future earnings saved.

FINDINGS:
The public policy implications of these two programs will be summarized for the areas of: distribution of technology, clinical trials, financing and regulation. Strategies for evaluating and implementing assessments of future medical innovations will be drawn from the data gathered.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS04254 CATEGORY: QUALITY OF CARE - EVALUATION OF SYSTEM & ORGANIZATION PERFORMANCE

TITLE: Costs and Control of Antibiotic Resistance

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-80	06-30-81	29,565	29,565	29,565

INVESTIGATOR NAME AND ADDRESS

GARBER, ALAN M
NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 MASSACHUSETTS AVE
CAMBRIDGE
MASSACHUSETTS 02138

OBJECTIVE:
To analyze in detail the externalities generated by antibiotics as important sources of market failure in the delivery of health services and to provide a general theoretical framework for analyzing the social costs of antibiotic use.

APPROACH:
Statistical models will be developed that relate risks of acquiring resistant infections to antibiotic use in specified populations and applied to a unique set of hospital data, with a view toward illustrating the methodology and estimating parameter values for one hospital. Policies will be examined for resistance control in hospitals based on coordinating antibiotic use and using empirical estimates from the hospital data to derive optimal hospital policies for resistance control. The empirical analysis will rely primarily on individual data from the Peter Bent Brigham Hospital (PBBH), including patient characteristics, antibiotics received, and bacterial isolates. This data set represents 4151 hospital admissions on two medical wards in the PBBH that were included in the Boston Collaborative Drug Surveillance Program, covering the years 1967-1973. The PBBH data will be used to illustrate the methodology and show how a hospital might monitor resistance changes to assess the external costs of antibiotic treatment and to optimize antibiotic use.

FINDINGS:
The methodology used here can be extended to analyze national policies toward the control of antibiotic resistance and have practical application in developing hospital-based resistance control programs. This project will consider such policies as restricting the use of antibiotics in animal feeds and limiting antiobiotic prescriptions. The general model for the spread of resistance and the control problem can also be applied to pest control where mutational resistance to pesticides is important.

RECORD NO. 233793019 CATEGORY: QUALITY OF CARE - EVALUATION OF SYSTEM & ORGANIZATION PERFORMANCE

TITLE: Encouraging Appropriate Care for the Chronically Ill Elderly

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	06-30-83	1,000,000	1,833,811	4,130,112

INVESTIGATOR NAME AND ADDRESS

SKINNER, DOUGLAS
APPLIED MANAGEMENT SCIENCES INC
962 WAYNE AVE
SILVER SPRING
MARYLAND 20910

OBJECTIVE:
Goals of the study are more appropriate use of nursing homes, better outcomes in nursing home patients, and reduction of hospital back-ups.

APPROACH:
Nursing homes will be paid bonuses for admission of "heavy care" patients, and for meeting patients care goals including discharge. Size of the bonus will be determined by the level of dependency a patient suffered at admission. Outcome payments will be contingent upon appropriate patient outcomes such as improvement, maintenance, or discharge. More than 3,600 patients will be studied in 48 homes in 2 cities (24 per city). Half the homes will receive the bonuses, while the other half will be a control group. A randomized experiment with repeat measures in a three factorial design will be employed. Nursing home staffs will assess patients, set goals, and review goal attainment. These will be validated by study staff functioning in the role of assessors. Only valid and appropriate assessments,goals, and performance will be acceptable for bonuses purposes. Work sampling will measure minutes of direct patient care controlling for patient characteristics. The Contractor will provide data collection and processing services only. Analyses will be conducted by NCHSR intramural staff.

FINDINGS:
Data collection is scheduled to begin in October, 1980. Preliminary findings will be available in Fall, 1982. The report will cover treatment impacts upon nursing home case mix, patient outcomes in ADL functioning, mental functioning, general well-being, mortality, and length of stay, as well as length of stay in hospitals serving the nursing homes.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS02738 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: Optimization Models for Management Decision-making

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-77	11-30-81	98,190	289,785	289,785	WILSON, EDWARD C ALBEMARLE COUNTY MEDICAL SOCIETY BOX 744 CHARLOTTESVILLE VIRGINIA 22901

OBJECTIVE:
To develop optimization models for physician decision-making for the evaluation of four complaints common to ambulatory practice in such a manner as to reduce physician uncertainty at minimal dollar cost.

APPROACH:
A probability-based optimization model has been developed for use as a decision aid for diagnosis and treatment of ambulatory care problems. Data for the model have been assembled for the complaint of diarrhea through a combination of expert opinion and literature search and will eventually be compared to actual data base experience in order to determine optimal probabilities for medical process paths while keeping minimal cost in mind. The intent is to extend this methodology to other common complaints comprising 16% of ambulatory practice and to eventually assess its utility in the educational process.

FINDINGS:
This study will cast light on the value of actuarial data-based estimation procedures as compared to protocols based on expert opinion. It will also define the optimal care process for a common ambulatory problem wherein the value system is reduction in physician uncertainty at minimal dollar cost and will be useful for audit and educational purposes. An optimization model has been developed for the treatment of diarrhea and preliminary tests have shown it to reliably simulate expert medical opinion. The model has been implemented and tested on a desk-top microprocessor. Efforts, in the fourth and final year of this project, will continue along the line of descriptive and prescriptive function validation. Clinical data will be obtained prospectively from an operating ambulatory care practice located several miles away as part of the evaluation process.

RECORD NO. HS03029 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: Support Systems, Stress, and Primary Health Care

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
03-01-79	02-28-82	170,627	319,004	421,993	GORTMAKER, STEVEN L HARVARD UNIVERSITY BOSTON CAMPUSES BOSTON MASSACHUSETTS 02115

OBJECTIVE:
To analyze the roles of stress and social support in utilization of health services in primary care settings and to lay the groundwork for development of an intervention strategy to reach people in perceived stressful situations who might benefit from social support. The proposal grew out of the principal investigator's previous work with families.

APPROACH:
The proposal addresses these issues: Definition and measurement of the concepts of social support and stress; the relationship between the occurrence of stressful life events and use of primary care services; the effectiveness of social support in ameliorating the negative effects of stressful life events and, therefore, use of health services; assessment of changes in stress and support systems over time and determination of how these relate to primary care utilization. These issues will be addressed through the use of interviews, diaries and medical record reviews of 300 to 450 patients who will be followed for one year. Diaries have been completed by a random sample of patients.

FINDINGS:
The first wave of interviews was completed in May of 1980 with a completion rate of 80%. The 100 diaries were returned with a completion rate of 85%. These are unusually good return rates. Medical utilization will be cross validated with patient's self reports, diary data, two interviews, and a medical record review, one year prior to study and the year during study. Stress and social support measurement models have been developed. This study will provide new knowledge and methodological techniques in an area where such contributions are sorely needed. The relationships of stress and social support to medical care utilization behavior will be valuable for health services planning.

RECORD NO. HS03040 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: Verbal Interactions and Health Outcomes by Age Groups

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-79	07-31-82	156,723	273,373	323,899	PUTNAM, SAMUEL M UNIVERSITY OF NORTH CAROLINA CHAPEL HILL NORTH CAROLINA 27514

OBJECTIVE:
To validate a new taxonomy for coding patient-physician verbal interactions and to relate them to patient satisfaction, compliance, and health status; and to develop as well as pilot test a method of training physicians in interviewing skills based on the principles of the taxonomy.

APPROACH:
Data will be obtained in two phases. In Phase I, ten (10) physicians are studied, each of whom will see sixteen (16) patients (160 interactions) from the walk-in clinic. These visits are tape recorded, transcribed, and coded according to specified outcomes. Phase II consists of a clinical trial of the usefulness of training physicians in the use of verbal response modes (SVRM) to determine if such use improves patient satisfaction, compliance and health outcomes. The ten physicians from Phase I will be randomly assigned between treatment and control groups, while ten additional physicians will be randomly allocated between groups. The treatment group will be given only non-directive attention. Each physician will see twelve patients for an initial and follow-up visit. A comparison of patient outcomes of each group of physicians will be made.

FINDINGS:
This study, the first which attempts to show that training physicians in interviewing makes a difference in the health outcomes of their patients, has implications for changing provider attitudes and behavior thereby increasing physicians capability to provide quality care, as well as cost savings, and lower incidence of malpractice suits. Cost savings are possible as physicians order fewer tests, and take a more careful history.

RECORD NO. HS03575 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: RCT of Informed Consent for Elective Surgery

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-01-79	12-31-80	0	52,775	52,775	BUNKER, JOHN P STANFORD UNIVERSITY 703 WELCH RD., SUITE G-1 STANFORD CALIFORNIA 94305

OBJECTIVE:
This study will evaluate the impact of new informed consent procedures used in elective surgery through identification of their effect on patient understanding, attitudes, and behavior.

APPROACH:
The specific differences to be assessed, by means of a randomized controlled trial, include: (1) patient's level of knowledge of risks, benefits and alternatives; (2) patient's perception of and attitudes toward participation in decision-making; (3) patient's additional information-seeking behaviors; (4) patient's evaluation of spouse's involvement; (5) patient's anxiety levels before and after surgery; (6) patient's satisfaction with physician-patient communication; (7) physician's satisfaction with physician-patient communication. Other indicators to be monitored include: (1) morbidity levels/complication types and rates; (2) recovery time; (3) refusal rates of surgery.

FINDINGS:
This study is the first of its kind to analyze the impact of the informed consent process from the communication perspective. It tests a potentially more useful model for informed consent in elective surgery and has been developed using insights and observations from what is known about learning and decision-making from the social sciences. As increasing numbers of questions are raised concerning elective surgery levels nation-wide, it will become imperative to document the role of the informed patient/consumer in this process.

RECORD NO. HS03599 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: A Profile-Based Dental Utilization Review System

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-82	230,358	451,479	709,827	BAILIT, HOWARD L UNIVERSITY OF CONNECTICUT HEALTH CENTER FARMINGTON AVE FARMINGTON CONNECTICUT 06032

OBJECTIVE:
To evaluate the cost effectiveness of a utilization review (UR) system based on information derived from dental practice profiles and to gain basic knowledge of UR methods related to practice profiles and the prospective review of claims.

APPROACH:
Practice profiles will be developed from insurance claims obtained from two major carriers for 1000 dentists in order to identify potential overutilizers. These dentists will be sent letters informing them of their unusual practice patterns and future practice will be monitored for improvement. Non-responders will be sent additional letters and all of their claims will receive pretreatment review rather than the normal 3-5%. The cost effectiveness of this system will be evaluated in light of the existing UR system.

FINDINGS:
It is expected that this profile-based UR system will prove to be more cost effective than present methods and that it will provide answers to the root cause(s) of over-utilization of dental services. The results should prove to be of value to PSROs with the potential interest in including dental services review and in the development of national health insurance policy. Progress to date includes selection of 1100 dentists from three insurance plans, identification of over-utilized dental services for profiling, development of dentist utilization profiles, and initiation of data collection.

RECORD NO. HS03693 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: Prediction of Cost-Effective Stroke Rehabilitation

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-79	04-30-81	0	15,808	15,808

INVESTIGATOR NAME AND ADDRESS

JOHNSTON, MARK V
CLAREMONT GRADUATE SCHOOL

CLAREMONT
CALIFORNIA 91711

OBJECTIVE:
To develop models and methodology for the prediction of outcomes and costs of stroke rehabilitation.

APPROACH:
Multiple predictor variables will be coded for all patients at admission to the stroke rehabilitation unit at a hospital in California using the format of an ongoing Hospital Utilization Project. These variables will include age, prior living arrangement, ICDA diagnoses, and functional status--including rated independence in self care, mobility, and continence, among others. At discharge, a vector of health outcome variables (e.g., functional status) and costs (e.g., monetary, therapy hours, length of stay) will be measured. In addition, a three month post-discharge follow-up of all admitted patients will be conducted by mail, with supplementary telephone contact. Post-discharge cards and functional status after discharge also will be assessed. Multivariate analysis will be used to develop predictors both of health status outcomes and costs, both in-hospital and post-discharge. The models developed in this prospective study will be partially cross-validated or compared with previous year data from the Hospital Utilization Project.

FINDINGS:
This research is expected to provide a clinically useful tool in making resource allocation decisions for the treatment of stroke victims.

RECORD NO. HS04096 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: Choice and Predictability in Health Care Settings

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-15-80	09-14-84	89,850	89,850	522,695	WALLSTON, KENNETH A VANDERBILT UNIVERSITY NASHVILLE TENNESSEE 37240

OBJECTIVE:
To determine the effects of allowing patients control (choice) and/or predictability (information) in their medical care on health outcomes (stress and its physiological, subjective and behavioral consequences).

APPROACH:
Field experiments will be conducted in three medical situations; preparation for a barium enema, behavioral therapy in conjunction with chemotherapy, and the general physical examination, including pelvic examination for women. In each situation, prior to the procedure, one group of patients will be allowed to choose between alternative procedures, another group will receive procedural and sensation information only about one alternative, and a third group will be given only routine information and instruction. Stress reactions will be measured and analyzed to test three hypotheses. Stress reactions will be lower in the group given choice than in those given information only, and lower in both of these groups then in the group of patients given neither control of predictability; and this effect will be positively related to individual differences in the desire for or expectation of control. Scales to measure these individual differences will also be developed under this grant.

FINDINGS:
The results of this study might have significant impact on patient well-being by stimulating changes in medical practice. The study will also operationalize one dimension of the increasingly recommended but ill-defined concepts of patient responsibility and self-care and provide evidence concerning their benefits. Development, testing and selection of measures of individual differences in desire for control have been successfully completed.

RECORD NO. HS04106 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: Self-Care: Practices and Attitudes in the U.S.

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-80	09-29-82	75,138	75,138	154,027	ANDERSEN, RONALD M UNIVERSITY OF CHICAGO 5801 S ELLIS AVE CHICAGO ILLINOIS 60637

OBJECTIVE:
To develop typologies and models of self-care and analyze secondary data containing questions relevant to self-care.

APPROACH:
Data from the 1976 national telephone survey of 7,781 persons measuring access to care has been obtained from a secondary analysis. Certain measures in this survey will be used as a proxy for the "health locus of control" measures of importance in this area. Literature has been reviewed and a self care synthesis will be attached to this analysis. The 1978 12-community survey will be analyzed to identify any relationships between self-care measures and utilization of services, particularly ambulatory medical care. In the 1979 survey of five cities the costs of care are emphasized as well as cost issues, therefore, relationship between self-care and costs of care will be easier to estimate and will be a major part of this analysis.

FINDINGS:
Self-care has been defined as a discretionary health motivated behavior initiated by the lay person on his or her own behalf or on behalf of family, friends or community to promote health or treat illness. This process begins when the lay person develops awareness and/or concern about his or her own health and decides to take some type of action to deal with it. A typology on self-care paper has been developed. The analysis of the 1978 and 1979 surveys will continue the process of hypothesis testing and produce a theory of self-care and a research strategy for next steps.

RECORD NO. 233793008 CATEGORY: QUALITY OF CARE - ENHANCING THE EFFECTIVENESS OF HEALTH SERVICES

TITLE: Description, Analysis and Assessment of Health Hazard/Risk Appraisal (HHA) Programs

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	03-13-81	0	155,382	155,382	BEERY, WILLIAM L UNIVERSITY OF NORTH CAROLINA CHASE HALL CHAPEL HILL NORTH CAROLINA 27514

OBJECTIVE:
This study will provide an analysis, and a description of the current use and types of HHA application.

APPROACH:
The methods include: literature review, consultation with HHA experts, and site visits to selected HHA programs to identify and secure descriptive and analytical data for secondary analysis. The influence of such factors as: sponsorship, setting, conditions under which HHA is administered, linkages to other health promotion and disease prevention activities and the health delivery system will be investigated. An evaluation of costs and benefits will be made to provide a basis for judging whether and under what conditions HHA should be supported either by Federal and/or private sources. Suggestions of areas needing further research will be delineated.

FINDINGS:
An annotated analytical review of the literature, both published and unpublished has been completed. The analysis includes: the historical development of HHA, a matrix comparing the components and the characteristics of the thirteen HHA instruments, and the scientific basis used for risk estimation update and risk factor reduction. Approximately 275 HHA programs were identified, criteria were developed to select fifteen of these programs for site visits. A field protocol has been developed and pretested. Five site visits have been made.

RECORD NO. HS02654 CATEGORY: QUALITY OF CARE - MALPRACTICE

TITLE: Health Dispute Resolution: Methods and Case Experience

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-77	06-30-81	63,308	289,581	289,581

INVESTIGATOR NAME AND ADDRESS

LADIMER, IRVING
AMERICAN ARBITRATION ASSOCIATION
140 W 51ST ST
NEW YORK
NEW YORK 10020

OBJECTIVE:
To develop a data base on medical malpractice claims entering the arbitration forum, and to undertake comparative analyses of cases falling under the jurisdiction of two forums: arbitration and litigation.

APPROACH:
Currently there are 15 statewide or local private programs for malpractice arbitration. These 15 private programs are in 10 states. The total number of cases expected to be available for either the comparative or intra-forum analyses is 300. Of these, approximately 235 are expected to be California or Michigan cases. A much larger number of cases on litigation from these two jurisdictions would be available from the tapes of the National Association of Insurance Commissioners (NAIC).

FINDINGS:
As of July, 1979 the Medical Malpractice Arbitration Research Data Base included 205 closed cases. These occurred over 12 years, between 1967 and 1978; but more than 75% occurred in the five-year period 1973 through 1977. About 52% of the 205 cases resulted in arbitral awards. The median time from claim-producing incident to case closure was 27 months. This overall time was affected, in more than 60% of the cases, by claimant's filing of a lawsuit prior to the initiation of arbitration. In half of such cases, nine months passed after the filing of suit before arbitration was initiated. The median time from initiation to conclusion of arbitration, was 9 months.

RECORD NO. HS02887 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Decision-Making in Jewish Law Pertaining to Medicine

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-77	09-30-80	0	51,793	51,793	STERN, JOSEPH B BOSTON COLLEGE CHESTNUT HILL MASSACHUSETTS 02167

OBJECTIVE:
To examine the accumulated experience of two thousand years of decision making in Jewish ethical-legal tradition relative to health and medical issues, and to develop a method for teaching ethical procedures for medical decision-making and guidelines for policy formulation in the medical setting.

APPROACH:
Relevant aspects of Jewish Law (Halakkah), namely the Responsa literature (legal-moral precedents) relating to medical issues will be reviewed for the purpose of developing a typology of cases. The religious, legal or ethical import of these cases will be minutely examined and clarified with collaborating physicians. The Responsa literature will be searched by computer and relevant cases and decisions extracted. A set of normative criteria will be developed to analyze cases and ultimately a set of tested analytical algorithms will be developed based on the Responsa which will have value for medical decision-making.

FINDINGS:
The objective is the development of analytical algorithms, based on Jewish legal-ethical precedent, which will have applicability and value for modern medical decision-making.

RECORD NO. HS03843 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Cost Effective Methods for Collecting Health Data

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-80	06-30-82	168,657	168,657	286,469

INVESTIGATOR NAME AND ADDRESS

SUDMAN, SEYMOUR
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

URBANA
ILLINOIS 61801

OBJECTIVE:
To determine how the cost of diary panel survey procedures can be reduced without unduly compromising the quality of the data obtained.

APPROACH:
A revised study design will require a panel of 1200 households. At the conclusion of an initial interview, each respondent will be asked to maintain a monthly or bimonthly diary of household health events for a four-month period. Respondents failing to return a monthly diary will be interviewed by telephone. The following experimental treatments will be tested utilizing a 2 x 3 x 4 factorial design: 1) initial face-to-face vs. telephone interviews; 2) compensation for the initial interview vs. no such compensation; 3) guaranteed compensation for a completed diary or telephone interview vs. compensation contingent on completion of a diary; 4) one-month diary forms vs. two-month diary forms; and 5) telephone vs. monthly mail vs. no scheduled contact with households.

FINDINGS:
Accurate information is needed on the incidence of illness and the cost of health services both for making decisions on the nation's health care system and for evaluating these decisions. This information is increasingly necessary at local and state levels so that governmental units can make policy decisions for their area, as well as national. Combining the telephone diary methods procedures has the potential of resulting in very high quality data at costs that are low enough so that the procedures can be adopted at local, state, and national levels. The results from this research may make new procedures available to health researchers and policymakers, and have important implications for other large continuing studies.

RECORD NO. HS03994 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Adequacy and Validity of Data About Acute Poisonings

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-01-80	07-31-81	50,719	50,719	50,719	VELTRI, JOSEPH C UNIVERSITY OF UTAH 50 NORTH MEDICAL DRIVE SALT LAKE CITY UTAH 84112

OBJECTIVE:
To investigate the magnitude of the poisoning problem in Utah, assess the kinds of data that can be reliably obtained from sources other than the Poison Control Center, and explore the relationship between data gathered by the Intermountain Regional Poison Control Center (IRPCC) and the statewide poison emergency problem.

APPROACH:
For a period of six months poison data will be collected from physicians, hospitals, a general population survey, and the IRPCC. The information will be examined to describe the extent to which data available from these different sources can be used to estimate the incidence of poisonings in Utah, to describe the ways in which health care facilities are used for poisoning cases, and to investigate whether certain types of poisonings can serve as "tracer" conditions, a technique used by evaluators in the other critical care areas. The primary purpose of the study is to assess rates and proportions, not to compare groups.

FINDINGS:
It is believed that regional Poison Control Centers properly integrated into an organized Emergency Medical Services System (EMSS) can reduce mortality and morbidity. However, no evaluations have been done concerning the extent to which these centers are effective in reducing mortality and morbidity and little is known about the magnitude and severity of poisoning problems in the general population. The diversity of data sources makes it difficult to determine the types, quantity, availability and reliability of the data and how they might be used to evaluate programs. This study will compare techniques for obtaining data and the usefulness of the different kinds of data for evaluation purposes. It will lay the foundation for studies designed to measure the impact of new poison control services such as the demonstration program authorized under the 1979 Amendments to the EMSS Act.

RECORD NO. HS03995 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Use of Health Services: Revised Research Bibliography

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-79	10-31-80	4,938	57,517	57,517	EICHHORN, ROBERT L PURDUE UNIVERSITY WEST LAFAYETTE INDIANA 47907

OBJECTIVE:
To revise and update The Utilization of Health Services: Indices and Correlates, co-authored by Lu Ann Aday and Robert L. Eichhorn, and published by NCHSR in 1972 (DHEW Pub. No. HSM 73-3003).

APPROACH:
The grantee will review the research literature for 1971-1979 to uncover new utilization studies; review the 207 abstracts presently included in the bibliography, purging those that are out of date, methodologically unsophisticated by today's standards, and irrelevant to current research and policy issues; re-examine the indices and correlates of utilizations that were employed in the 1972 bibliography, and add new measures and predictors of use that have entered the literature; and put the revised bibliography into a computerized format. This approach allows for better indexing and the development of a keyword system which simplifies the task of updating the bibliography in the future.

FINDINGS:
The significance of this research lies in its emphasis on providing a rigorous ordering of the best of the utilization literature. The typologies of indices and correlates, selected trends and summarized findings will be useful to both researchers and decision makers.

RECORD NO. HS04149 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Severity Index Conference

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
05-01-80	06-30-81	35,000	35,000	35,000	GUSTAFSON, DAVID H UNIVERSITY OF WISCONSIN MADISON 500 LINCOLN DR MADISON WISCONSIN 53706

OBJECTIVE:
To identify the critical strengths and weaknesses of various approaches to severity index construction for trauma; to determine the boundaries of use of various trauma indices; to avoid duplication of effort in severity index development; and to determine the most productive paths for future research in the severity index field.

APPROACH:
Conference participants will include the major developers of severity indices for trauma and methodologists skilled in the theoretical underpinnings of index development. These participants are drawn from disciplines of clinical medicine, decision theory, and statistics to realize the objectives of the conference. Some users of severity indices are also to be invited. As a result of a set of intensive preconference activities including a survey of developers, the conference will develop a set of criteria and tests against which given indices may be judged by both developers and users.

FINDINGS:
The findings of the conference will be a determination of the gaps in knowledge in current severity index construction research for trauma and provide direction for future research in this area so that duplication of effort can be eliminated and maximum progress can be assured. Severity indices are essential to classify patients for evaluation of the efficacy of emergency medical services.

RECORD NO. HS04201 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Time Reversed Crossover Designs in Health Services

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-01-80	01-31-82	30,629	30,629	30,629

INVESTIGATOR NAME AND ADDRESS

SOLLECITO, WILLIAM A
UNIVERSITY OF NORTH CAROLINA

CHAPEL HILL
NORTH CAROLINA 27514

OBJECTIVE:
To compare time reversed crossover designs with other quasi-experimental designs to determine which is the most effective as a tool in evaluating the impact of three types of benefit packages provided to the United Mine Workers by the UMW Health & Retirement Plan which has been in operation for almost thirty-three years.

APPROACH:
This dissertation grant will evaluate several different quasi-experimental designs to determine their relative power in analyzing data obtained from the United Mine Workers (UMW). A set of time reversed crossover designs will be compared with three other quasi-experimental designs to establish the advantages and disadvantages of each in drawing conclusions for policy uses regarding UMW coverage.

FINDINGS:
Because of the importance of cost-sharing proposal in the debate over National Health Insurance coverage, study designs and analytic capability in regard to large data bases requires increased precision. This study will add to the understanding and ability to employ such data bases as policy-making sources by increasing the methodological sophistication available in the area of data analysis.

RECORD NO. 233793007 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Data Processing Services

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-10-79	09-09-82	0	329,404	329,404	GREENLEAF, ROSS W INPUT/OUTPUT COMPUTER SERVICE, INC 400 TOTTEN POND ROAD WALTHAM MASSACHUSETTS 02154

OBJECTIVE:
The National Center for Health Services Research currently has a number of research activities involving the production of unique and valuable data bases. This contract is to provide data processing support for these activities.

APPROACH:
The number and nature of the research activities varies greatly. This requires a wide scope of support activities. Support under this contract is available to all NCHSR professional staff, for the following services: Data Base Maintenance, Analysis File Development, programming. To the extent useful services are provided using Government Data Processing Resources.

FINDINGS:

RECORD NO. 233793009 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Analysis of State Authorities for Regulation of the Quality of Health Care Services

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-30-81	0	228,663	372,915	MALONEY, SHEILA A ASPEN SYSTEMS CORPORATION 20010 CENTURY BOULEVARD GERMANTOWN MARYLAND 20767

OBJECTIVE:
To provide health care officials, whose responsibilities are to coordinate and implement health care and quality assurance mechanisms, with a single, comprehensive source of information on Federal legislation, State statutes, and private association provisions that regulate the quality of health in the United States, and to identify the gaps, supplications, and conflicts in each of these authorities.

APPROACH:
The contract identified and documented all Federal laws, State statutes, and self-regulatory provisions effected by professional organizations, focusing on licensing and recertification of individual and institutional health care providers, inspection and monitoring of facilities, and reporting requirements. A pilot study of nine states, utilizing on-site interviews, was conducted to document the actual procedures and resources used and problems encountered in the implementation of quality assurance mechanisms.

FINDINGS:
The final product from this contract is a computer-searchable data base containing all Federal, State and private association health care regulatory provisions (laws, codes, regulations, standards) current through December 1980, and a hard copy analysis of how quality assurance mechanisms are implemented in nine States (Arizona, California, Colorado, Kansas, Massachusetts, Michigan, Mississippi, New York, and South Carolina).

RECORD NO. 233794003 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Evaluation Methodology for Use in Assessing Available Data by CON and Health Planning Programs

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	12-31-81	0	353,600	353,600	BENTKOVER, JUDITH D. LITTLE, ARTHUR D., INC ACORN PARK CAMBRIDGE MASSACHUSETTS 02140

OBJECTIVE:
To develop methodologies for use by health planners and State Certificate-Of-Need (CON) authorities for assessing the implications for future operating costs of hospital capital expenditure decisions; to perform additional analyses of the relationship between capital expenditures and hospital finances and other characteristics.

APPROACH:
Several approaches will be utilized. First, industrial engineering studies of four specific types of capital expenditure, as they have applied in a sample of hospitals, will be developed, refined and compared to previous work. Second, retrospective microstudies of CON decisions will be conducted in five studies using previously-developed capital expenditure classifications. Finally, using national data, the Contractor will prepare estimates of expenditures and operating costs for broad classes of expenditure.

FINDINGS:
When completed, the project will provide methods and information which will be useful to policy-makers and State authorities for assessing prospectively the impact on operating costs of specific decisions for capital expenditure.

RECORD NO. 233803003 CATEGORY: SPECIAL STUDIES - SPECIAL STUDIES

TITLE: Synthesis of Hospital Organization Research

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-31-80	07-30-82	14,950	252,950	252,950	HAGE, JERALD UNIVERSITY OF MARYLAND COLLEGE PARK MARYLAND 20742

OBJECTIVE:
The study will produce a synthesis of organizational research in hospitals over the period 1960-1979 inclusive. A classification scheme has been developed based on sociological theory in order to make the synthesis meaningful to the community of researchers; classifications are also provided geared toward policy applications. Evaluation of theoretic, methodological and substantive importance are provided. In addition, abstracts are included.

APPROACH:
Hospital organizational research of the 1960's has been synthesized in two previous NCHSR contracts; the work undertaken here attempts to extend this work into the 1970's employing a comparable classification sshame. All relevant journals are searched, along with book publishers, dissertation abstracts, government publications, and unpublished manuscripts from certain institutions. Research identified must employ an organizational measure, and must involve empirical data. All coding is performed by at least two independent coders, and evaluative items are validated through review by an external committee of acknowledged experts in the field. Abstracts are written except in the instance where the original published abstract is deemed informative enough on all items coded. Codes for policy issues are being developed by the contractor working with several knowledgeable independent consultants. The hospital organizational research will be integrated with the wider field or organizational research through its relationship to a set of propositions characterizing the most important work in the broader field.

FINDINGS:
Analysis will concentrate on the state of knowledge in important theoretical, substantive and methodological areas. It is expected that knowledge in the area of multi-institutional arrangements will have increased considerably since the 1960`s, but that many crucial theoretical issues will not have been addressed. The quality of research methodology since the 1960's will have improved, although the need for better organizational measures will be evident. With a body of knowledge from 20 years of research codified, it is expected that the results of this study will have direct bearing on current administrative and policy decisions.

RECORD NO. HS03256 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPEUTIC INNOVATIONS

TITLE: Evaluation of Breast Cancer Detection Strategies

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-01-79	05-31-81	68,177	146,575	146,575	GOHAGAN, JOHN K WASHINGTON UNIVERSITY LINDELL AND SKINKER BLVD SAINT LOUIS MISSOURI 63130

OBJECTIVE:
To identify cost effective breast cancer detection strategies through retrospective assessment of the experience encountered in screening a large population of women.

APPROACH:
The group will develop risk profiles for 10,000 women in order to determine the value of specific screening modalities as predictors of breast cancer. The sequential pattern of application for each combination of specific detection modalities will also be evaluated. In addition, the group will prepare a detailed implementation manual so that the method for selecting screening strategies can be used in other settings.

FINDINGS:
This study evaluated three main detection modalities (mammography, thermography, and clinical palpation), in a controlled setting, and identified the most appropriate detection strategies for women according to their individual risk profile. The investigator reports that the three most important factors are epidemiological risk level due to age, radiation hazard, and the degree to which both procedural and opportunity costs are borne by the woman. Periodic screening of young, low-risk women is appropriate only when radiation hazard is heavily discounted and procedural costs are borne by others, or when one assigns very high opportunity costs to a missed cancer in comparison with those of an unnecessary biopsy. Among older women, who are at very high risk, periodic screening is appropriate. The investigator also reports that, whenever screening is appropriate, high quality mammography in combination with clinical palpation is the best strategy for the majority of women. The investigator concludes that thermography, as it is commonly practiced with present sensitivity and specificity rates, should play only a minor role possibly as a sensitivity-increasing technique, and especially in instances of conflicting findings on the other tests.

RECORD NO. HS03314 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPEUTIC INNOVATIONS

TITLE: Evaluation of Medical Diagnostic Technology

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-79	06-30-82	352,621	709,138	1,128,644	FINEBERG, HARVEY V HARVARD UNIVERSITY 677 UE BOSTON MASSACHUSETTS 02115

OBJECTIVE:
To examine the efficacy, cost, and cost effectiveness of three classes of diagnostic technology (laboratory tests, imaging, and physiological function testing) to establish analytic models which are broadly applicable to other diagnostic tests and technologies.

APPROACH:
A systematic methodology for assessing the efficacy and economic consequences as well as factors affecting the diffusion process of medical technologies, including multi-channel laboratory analyzers, individual chemistries, white blood cell differential counters, computed tomography, ultrasound, chest x-ray, and long term electrocardiography, will be developed. The evaluation methodology will include three major elements: (1) expanded concepts of efficacy, cost, and cost-effectiveness, (2) development of generalized approach to the measurement of the information content of tests based on receiver operating characteristic principles, and (3) development of a systematic analytic framework for considering impacts of policy interventions.

FINDINGS:
A comprehensive framework, containing elements of technology evaluation and detailed concepts of efficacy assessment and cost-effectiveness analysis, will be developed to address issues relating to the development, dissemination, and use of diagnostic technologies in an environment of limited resources. The results will be relevant for reimbursement policies, design of health planning criteria, and policy discussions.

RECORD NO. HS03625 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPEUTIC INNOVATIONS

TITLE: An X-Ray Screening Protocol for Extremity Injuries

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
02-01-79	09-30-80	0	55,925	55,925

INVESTIGATOR NAME AND ADDRESS

BRAND, DONALD A
YALE UNIVERSITY

NEW HAVEN
CONNECTICUT 06520

OBJECTIVE:
To develop and test statistical model for the decision to x-ray in the case of extremity injuries in the emergency facility.

APPROACH:
Patients with upper and lower extremity injuries will be studied prospectively. Data will be gathered on patient characteristics and clinical manifestations, such as "swelling" and "limitation of motion" to identify that variable or combination of variables which best indicates the presence of fracture, as confirmed by x-ray. The resulting model will be used to develop a protocol for use in determining the necessity for x-ray. The protocol will be designed to reduce the number of x-rays without increasing the number of "missed" fractures compared with the status quo and tested in over 1,000 patients. Patients identified by the protocol as low-risk will not be x-rayed, but will be followed up by telephone and re-examined if an undetected fracture is suspected.

FINDINGS:
Reducing the number of unnecessary x-rays would result in a substantial cost savings; the method proposed, if successful, also could be used for x-rays of other types of injuries and would also be adaptable to other diagnostic procedures.

RECORD NO. HS03645 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPEUTIC INNOVATIONS

TITLE: Utilization Patterns of Cranial CT

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
08-01-79	01-31-82	83,103	162,929	162,929

INVESTIGATOR NAME AND ADDRESS

MC NEIL, BARBARA J
PETER BENT BRIGHAM HOSPITAL
721 HUNTINGTON AVE
BOSTON
MASSACHUSETTS 02115

OBJECTIVE:
To assess the relationship between diagnostic indications for the yield of abnormal cranial computer tomographs.

APPROACH:
Data to be collected on 15,000 consecutive patients referred for cranial Computed Tomography (CT) to a university hospital and to a community hospital will include indications for CT (history, signs, symptoms, and laboratory results), yield of CT (normal or abnormal findings), demographic items, and a detailed analysis of CT findings as reported by a neuroradiologist. At the seven-, thirteen-, and nineteen-month intervals, assessments of the relationships between indicators and CT yield will be made using both simple sorting and tabulating techniques as well as discriminant analysis. Regression analysis will be used to derive information concerning the ability of various indications for predicting CT yield. These interval assessments will be reported to physicians participating in the study. A statistical comparison of CT utilization patterns before, during, and after the study to determine whether the interval educational assessments have been effective. The feasibility of deriving optimal CT locations based on the geographical location of patients will be explored.

FINDINGS:
It is anticipated that this study will provide information concerning both utilization and location of Computed Tomography units which will have important implications for cost containment efforts and quality of care both in health planning (e.g., certificate-of-need decisions) and the delivery of health care (e.g., unnecessary procedures).

RECORD NO. HS03665 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPEUTIC INNOVATIONS

TITLE: Decision and Policy Analysis for Fetal Monitoring

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
07-01-79	12-31-80	2,841	31,207	31,207

INVESTIGATOR NAME AND ADDRESS

COHEN, ALAN B
HARVARD UNIVERSITY
677 HUNTINGTON AVENUE
BOSTON
MASSACHUSETTS 02115

OBJECTIVE:
To develop a model of clinical decision-making regarding fetal monitoring in intrapartum management of obstetrical patients considering such variables as safety, efficacy, and cost; and to analyze public policy options and implementation strategies.

APPROACH:
A decision-making model for fetal monitoring will be developed by applying Bayes' Theorem to the major variables as identified in the medical literature and by expert obstetricians. Cost-effectiveness analysis (rather than cost-benefit analysis) will then be used to assess societal costs of alternative monitoring methods. Sensitivity analysis will be made of the most uncertain elements and assumptions. The practical application of this information will be addressed through the identification of relevant policy options and the development of implementation strategies with special emphasis placed on cost containment. Implications for evaluating other medical technologies will also receive attention.

FINDINGS:
Fetal monitoring practices will be evaluated using decision and cost-effectiveness analyses, and policy options will be identified. The relative effects of the policy interventions upon the costs, diffusion, and the utilization of fetal monitoring will be assessed. These findings could be used to evaluate new technologies before they are introduced into medical practice.

RECORD NO. HS03834 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPEUTIC INNOVATIONS

TITLE: A Medical Database Approach to Evaluate Technology

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	09-29-82	361,139	720,184	1,148,304

INVESTIGATOR NAME AND ADDRESS

STEAD, E A, JR
DUKE UNIVERSITY

DURHAM
NORTH CAROLINA 27706

OBJECTIVE:
To continue the implementation of a cardiology data bank that provides data on the efficacy and efficiency of costly diagnostic and therapeutic procedures for patients with chronic illness in the area of cardiology.

APPROACH:
This project will build onto the existing ischemic heart disease data bank that presently contains information on over 6,500 patients. The approach couples patient care integrated data acquisition with regular follow-up. Principle modes of analysis will be the multiple logistic regression model, Cox's proportional hazards model, and decision-type methods. Longitudinal data is periodically integrated with previous entry point data making it possible to generate and test hypotheses relating various tests and procedures to patient outcome.

FINDINGS:
This project is expected to document the utility of computerized chronic disease data banks in the management of large numbers of patients with a given illness. It will generate appropriate strategies for the use, frequency, and sequence of those tests and procedures which are of value and establish a basis for evaluating tests which are unnecessary or of marginal value. This has important implications for the acceptance of new medical technology and the continued use and reimbursement for existing procedures.

RECORD NO. HS03879 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPEUTIC INNOVATIONS

TITLE: Effects of Computerized Drug Order Review System

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-01-79	02-28-82	103,049	200,376	200,376

INVESTIGATOR NAME AND ADDRESS

SIEGEL, CAROLE E
ROCKLAND RESEARCH INSTITUTE
BLDG 37
ORANGEBURG
NEW YORK 10962

OBJECTIVE:
Reviews open drug orders against a set of established guidelines and which informs clinicians of observed exceptions to them. The assessment is being made in 5 institutions for the mentally retarded. Investigation of factors which affect exception rates and changes in knowledge of pharmacotherapy (such as clinician characteristics, attitudes), and institutional and environmental factors are being undertaken.

APPROACH:
A medication order review system, as a component of a multi-state information system, has been operational for 4 years as a mechanism to flag exceptional cases for peer review and to promote continuing education. The system has 2 modules: a patient drug profile module and rules for questionable prescribing practices which was developed by medical staff serving a state-wide mental health care system. Over the next 2 years the system is to be installed in 50 mental health and retardation facilities in New York State. The present study will examine its effects in 4 state institutions. An assesment of the system for 1 institution has already been published. A notable finding of the assessment was the consistently high rate of exceptions with treatment of long term (3+ years) patients; low dose orders being most frequently recorded. With more frequently prescribed drugs, the exception rate declined over the 3 years experience with systems in one hospital.

FINDINGS:
The computerized medication order review system is now being implemented in the 50 psychiatric and mental retardation inpatient facilities of New York State. In its pilot site, the system appears to have caused a three-fold reduction in exception rates. In order to more carefully examine the direct effects of the system on clinicians' prescribing behaviors, a grant supported, controlled study has been undertaken comparing clinicians in settings with and without the system. During the first year of the project the activities carried out have focused on the establishment of the study population, instrument development, and pre-system assessments in those study facilities in which the computer systems have been installed.

RECORD NO. HS03892 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPEUTIC INNOVATIONS

TITLE: Experimental Evaluation of Computerized Drug Profiles

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-79	12-31-81	10,768	66,188	66,188

INVESTIGATOR NAME AND ADDRESS

TOMPKINS, RICHARD K
UNIVERSITY OF WASHINGTON

SEATTLE
WASHINGTON 98195

OBJECTIVE:
To assess the benefits of computerized drug profiles in terms of improved prescribing practices and savings in provider and patient time, and the costs in terms of system operating expenses and changes in drug expenditure and utilization patterns.

APPROACH:
This randomized controlled trial will make use of a currently available computerized data base and observational data from a sample of provider-patient encounters at the Seattle Public Health Service Hospital. The hospital has an operational Public Health Automated Medical Information System (PHAMIS), a modular computer-based information system used for patient registration, the recording of certain skeletal data about each outpatient-provider encounter, and the outpatient pharmacy system. Baseline data were collected for five months prior to the routine computer generation of a detailed drug profile for an 80% random sample of the clinic population. Identical drug information will be captured for the remaining 20% of patients, but no profiles will be generated. Analysis will include comparisons within and between the control and experimental groups both before and after implementation, and between group comparisons for any changes occurring within each group during the study.

FINDINGS:
Some additional data will be collected and additional analyses will be conducted on this as well as the already collected data during the 02 year. However, preliminary findings suggest that the only significant effect of profiles on provider time is to shorten the amount of time required to write prescriptions (and then, only if the profiles are actually used in the writing of those prescriptions). A Summary of the resultant effects of profile use on the cost of services indicates that $.063 per profile is required for computer and material expenses, and $.047 per profile for file clerk wages. No statistically significant differences were found in the quantity or costs of drugs prescribed.

RECORD NO. HS04231 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - DIAGNOSTIC AND THERAPEUTIC INNOVATIONS

TITLE: Models to Assist Cardiac Diagnostic Test Decisions

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
07-01-80	12-31-81	29,188	29,188	32,485	FORTESS, ERIC E HARVARD UNIVERSITY BOSTON CAMPUSES BOSTON MASSACHUSETTS 02115

OBJECTIVE:
This research represents a step towards a formal systematic method for rapid evaluation of new technologies using prospective evaluation, established epidemiological principles, and computer technology. The method will be developed using cardiac radionuclide tests and other tests for CAD diagnosis, but will be designed to be applicable to most diagnostic procedures.

APPROACH:
Steps in the research include the development of a clinical decision-making model based upon knowledge of the diagnostic efficacy and costs of CRS and expressed in decision-tree format; the development of a dynamic computer model to assess the effectiveness of alternative diagnostic strategies for CAD and to select the best test combination for various patient types and in advance of testing; and, to develop a set of policy options designed to encourage decision-makers to address the necessity to order and sequence diagnostic tests more efficiently and assess potential implementation strategies.

FINDINGS:
The model will relate the prior probability of disease, the sensitivity and specificity of alternative diagnostic tests, and the posterior probability of disease to varying levels of physician certainty required for further testing and treatment decisions. The study will identify relevant policy options available to planners and policymakers, giving particular attention to cost-containment strategies and implications for broader public policy affecting other medical technologies.

RECORD NO. HS02485 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Controlled Trial of a Quality Assurance Mechanism

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
03-01-77	02-28-81	0	604,598	636,643	MC DONALD, CLEMENT J INDIANA UNIV-PURDUE UNIV AT INDIANAPOLIS 355 N LANSING INDIANAPOLIS INDIANA 46202

OBJECTIVE:
To continue development and evaluation of an outpatient computer system designed to improve the process and outcome of medical care through the use of treatment protocols.

APPROACH:
Grantee will develop a series of simple, computer-based, medication-related protocols to test physician compliance to protocol and the impact of compliance on patient outcome.

FINDINGS:
Protocols will be evaluated by three methods--cost, process, and outcome--in order to demonstrate a cost-effective mechanism for insuring care quality and to provide a better understanding of the presently ill-defined interrelationships between process and outcome of medical care.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS02777 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Evaluation of a Hospital Data Management System

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-78	09-30-80	8,702	122,761	122,761	BRIAN, EARL W UNIVERSITY OF SOUTHERN CALIFORNIA LOS ANGELES CALIFORNIA 90007

OBJECTIVE:
To assess the utility of small, one-way order entry automated hospital information systems (AHIS) for use in small to medium size hospitals.

APPROACH:
Two specific areas will be emphasized in this study: Hospital cost implications and technological limitations of these systems. Using vendor supplied information, corroborated through visits to hospitals with operational systems, the project staff will prepare a general description of the capabilities of this class of hospital system. On a task by task basis, cost savings (or losses) will be projected for system use as compared to traditional manual methods. The software and hardware of commercially available systems will be evaluated to identify limitations for future system growth, such as how feasible it would be to add functions that make the system more comprehensive.

FINDINGS:
This study will produce an objective statement concerning the utility and technological limits of currently commercially available small AHIS. In view of the increasing interest by small and medium size hospitals to acquire such systems, this information should prove very useful to the hospitals and HSAs. It should also provide badly needed background information from which rational policies can be formulated encouraging or discouraging the use of this technology.

RECORD NO. HS03000 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Computer Intervention in Clinical Drug Therapy

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-78	08-31-81	0	695,561	695,561	COHEN, STANLEY N STANFORD UNIVERSITY STANFORD CALIFORNIA 94305

OBJECTIVE:
To develop, implement, and evaluate a computer based system, called MINERVA (Monitoring and Intervention in Therapeutic Actions), for automatically guiding the selection, dosage, and route of the administration of therapeutic drugs for hospitalized patients.

APPROACH:
The "ideal" drug management logic will be developed by means of a synthesis of current literature, laboratory efficacy results and expert recommendation. MINERVA will contain the logic and a computer-stored knowledge base concerning possible adverse drug reactions, inappropriate therapeutic situations, possible drug effects on laboratory test results and toxicity monitoring. Patterns of diagnosis, treatment, drug and laboratory data for individual patients which conflict with the knowledge base will cause advisory messages to be transmitted to the responsible physician. A randomized controlled experiment reinforced with before-after and time series elements is planned to evaluate the impact of the MINERVA system on the frequency of inappropriate drug actions, frequency and nature of physician acceptance. This project will rely on components of the operational mediphor (monitoring and evaluation of drug interactions by a pharmacy-oriented reporting) system and will interface with the operational LABSYS (Clinical Laboratory Information System).

FINDINGS:
This study is expected to identify the extent of inappropriate drug therapy as it relates to clinical laboratory testing, specific clinical circumstances and prior adverse reactions. It is expected that the MINERVA system will serve as a prototype for the development of other technology which utilizes pre-existing laboratory and pharmacy modules of medical information systems for purposes of prevention, peer review, and quality assurance.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS03573 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Clinical Computer Audit: Effects on Cost and Resource

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-01-79	07-31-81	33,845	54,883	54,883	THOMAS, JAMES C UNIVERSITY OF TEXAS HLTH SCI CTR HOUSTON BOX 20036 HOUSTON TEXAS 77025

OBJECTIVE:
To evaluate the effect of an automated medical record chart review system (AMRCRS) with regard to specific cost items in the care of ambulatory patients with chronic diseases.

APPROACH:
This study is designed to evaluate the effectiveness of the AMRCRS in the management of ambulatory care patients with chronic diseases; identify compliance problems and assess the adaptability of the AMRCRS for teaching quality assurance and awareness. Eligible patients are identified among established patients of the Diabetes Clinic according to criteria designed to ascertain true diabetic status and reduce the dropout rate experienced in earlier studies at the clinic. New patients follow the same criteria. Patients are randomly divided into two study groups as they are admitted. In Group I, the charts of patients have printouts of recommendations generated by the automated chart review program while they are withheld from the charts of the patients in Group II.

FINDINGS:
It is expected that the automated chart review program in this Diabetes Clinic will improve the process of care and, consequently, outcomes. Ultimately, the AMRCRS may demonstrate cost effectiveness over the traditional medical record through its anticipated streamlining effect on the use of medical care resources through improved organization of information.

RECORD NO. HS03650 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Integrating Medical Knowledge and Clinical Data Banks

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
05-01-79	04-30-81	23,426	49,666	49,666	WIEDERHOLD, GIO C STANFORD UNIVERSITY STANFORD CALIFORNIA 94305

OBJECTIVE:
To develop a computerized medical information system which is capable of accurately extracting medical knowledge on the treatment and evolution of chronic diseases from a data bank consisting of a collection of stored patient records and to facilitate the use of that knowledge by medical researchers and by clinicians in managing individual patients.

APPROACH:
The grant will develop a knowledge base data bank pilot system, called RX, that will be based on the American Rheumatism Association Medical Information System (ARAMIS). The project is predicated on the assumption that the initial problems of data acquisition storage and retrieval have been dealt with, and what remains is the complex task of accurately inferring medical knowledge from a collection of observations in patient records. This project will utilize data processing techniques from the field of artificial intelligence to interpret the observations of symptoms, therapy, and outcome in the data bank.

FINDINGS:
Computerized clinical data banks have enormous potential as tools for assessing the efficacy of new diagnostic and therapeutic modalities, for monitoring the quality of health care delivery, and for support of basic medical research. This grant will utilize techniques of symbolic computation from the field of artificial intelligence to address problems relating to complex time relationships, ill-specified definitions of disease states, complex therapeutic regimens, missing data, and strong potential selectional biases. The proposed research is expected to contribute to the development of improved methodologies for automated storage of medical knowledge and specifically to expand the reliability and utility of clinical data banks.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS03672 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Health Information System Transferability Evaluation

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-01-79	11-30-80	0	26,468	26,468	DITTMANN, JAY T UNIVERSITY OF MISSOURI COLUMBIA COLUMBIA MISSOURI 65201

OBJECTIVE:
The goal of this research was to develop and validate a systematic procedure to assist decision-makers in predicting the user resource costs when transferring a computerized information system from an operational site to a specified user site.

APPROACH:
The "transferability analysis procedure" was developed to assist decision-makers in the identification of areas in which a candidate system is deficient in meeting user requirements. This procedure provided a methodology for estimating the user resource costs which were required to correct identified system deficiencies, including default resource cost estimations, for key resource cost variables.

FINDINGS:
The results of the research demonstrated that the transferability analysis procedure can provide decision-makers with a reliable and useful predictive strategy for evaluation when assessing the resource cost of transferring a computerized information system into a specified user site.

RECORD NO. HS03735 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: A Transfer Mechanism for Medical Information Systems

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-15-79	09-14-81	0	19,548	19,548	PITELKA, KAREN J INDIVIDUAL AWARD--PITELKA, KAREN J. U OF MD, DEPT OF INFO SYS MNGM COLLEGE PARK MARYLAND 20742

OBJECTIVE:
To develop a theory for a mechanism of change which will provide for the transferability of health care systems from successful users to potential users.

APPROACH:
Transferring a medical information system from one health care environment to another is essentially creating a new version of the existing system. However, there must be defined a new version of the original system which will coincide with the new host. The definition of the "version progression" is what this project proposes to accomplish. This plan is based on the development of mappings between the different system development phases. Several iterations of such mappings will evolve into a superior description of the medical information system. The theory development will be facilitated by the use of requirements statement language and language development software.

FINDINGS:
The field of medical information systems has reached the point where systems that have been developed are now being marketed. If the principal investigator successfully develops a methodology for effectively transferring medical information systems technology, it would be of wide and practical interest to many institutions, industrial concerns, and planning agencies in need of improving their ability to transfer ideas and systems.

RECORD NO. HS03792 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: A Medical Information Systems Design Methodology

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-84	267,813	653,812	2,579,326	COX, JEROME R, JR WASHINGTON UNIVERSITY LINDELL AND SKINKER BLVD SAINT LOUIS MISSOURI 63130

OBJECTIVE:
To develop a methodology for the design of medical information systems capable of rapid incorporation/deletion of functions in response to user needs.

APPROACH:
Using five experimental data bases, incorporate the methods, techniques, and devices of data base models and systems, data base consistency, very large scale integration, software engineering, modular processors/modular interconnection, and system performance modeling and estimation in the design and testing of a medical information system.

FINDINGS:
Expected results of the proposed research include a variety of findings, dealing for the most part with cost-effective hardware and software techniques for defining, implementing, using, and modifying medical information systems. The practical outcomes of applying these findings will be (1) a reduction in the cost of building and testing new medical automation concepts and (2) an ease in replicating, outside of the primary development sites, those concepts that prove to be efficacious.

RECORD NO. HS03802 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Assessment of Technology in Chronic Disease

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-82	244,691	437,629	681,561	FRIES, JAMES F STANFORD UNIVERSITY STANFORD CALIFORNIA 94305

OBJECTIVE:
To establish the marginal benefit of specific technologies; analyze the efficacy of drugs and procedures in the community; develop techniques for drug surveillance; determine factors and interventions most strongly associated with patient outcome; determine test/procedure replicability and to establish optimal intervals for repeat testing; and compare alternate modes of data capture and to evaluate data quickly and quality control mechanisms.

APPROACH:
This project builds upon an operational, nationally available arthritis data bank actively investigating problems in rheumatic disease in order to systematically approach the general problems of assessment of distributed medical technology. The American Rheumatism Association Medical Information System (ARAMIS) currently tracks 10,000 arthritis patients, has information on 50,000 encounters, and 20 years of patient follow-up. The system is composed of ten separate data banks including university centers, population-based samples, surgical- and private-practice patients, multiple institutions, and pediatric patients. The data banks are supported by TOD (Time Oriented Databank), a computer data management system. Through its unique storage and retrieval capabilities data becomes readily available for individual study, for detecting correlations and interactions between variables, for comparison of therapeutic interventions with changes in clinical course, for life-table outcome analysis for charting distribution of values within a given patient population, and for a host of additional and potential search programs.

FINDINGS:
This project serves as a model for the use of the chronic disease data bank in technology assessment, in analysis of marginal benefit, in surveillance for problems from the use of technologies in the community, and for the determination of the external validity of traditional information sources. The following six major research activities will be undertaken: (1) Development of a data bank capability for systematic analysis of marginal benefit. Utilizing a stepwise logistic regression program (Most Valuable Variable), this study will identify the marginal information derived from a specific test or treatment; (2) Investigation of the marginal benefit of specific procedures; (3) Analysis of arthritis drug efficacy in the community; (4) Survey of long-term medication patterns in the community. The purpose here is to monitor the effectiveness and side effects of specific drugs administered for long periods of time; (5) Development of a capability for systematic response to the unexpected side effect, the single ominous case report; (6) Analysis of factors predicting surgical outcome for arthritis. The purpose here is to assess the outcome of total hip replacement as a prototype of operations for the management of severe arthritis.

RECORD NO. HS04050 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Analysis of Clinical and Managerial Data

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
02-01-80	01-31-82	80,676	80,676	158,636	BLEICH, HOWARD L BETH ISRAEL HOSPITAL 330 BROOKLINE AVE BOSTON MASSACHUSETTS 02215

OBJECTIVE:
To develop, demonstrate and evaluate a mechanism for retrieving and analyzing clinical and managerial data captured in the process of delivering medical care.

APPROACH:
This capability will be produced by linking the search, retrieval and statistical powers of the Medical Information Search and Retrieval system (MISAR) to the hospital information data base. A search and retrieval system to make clinical experience available to hospital physicians will be developed by creating inverted files of the clinical registration, and fiscal data resident in the hospital information system. This approach will be similar to the system in current operation in the hospital libarary ("paper chase"). Once the basic programming has been completed, the system will be made available to the clinicians via the 150 terminals serving the hospital information system. As the system is used by the physicians, information will be gathered (via computer questionnaire) on who uses it; how much it is used; the user perception of its worth; what purposes it was used for; and why certain physicians use it only once or twice.

FINDINGS:
It is expected that a system which operates on the clinical and management data base, much as "paper chase" works on the Library of Medicine MEDLINE data base, will become operational during the course of this project. Since "paper chase", which represents the medical literature, has been actively used at the hospital, it is anticipated that the clinical/management data base application, which represents the clinical experience, will be as enthusiastically received. The ultimate impact of this approach is seen to significantly improve the quality of clinical service. Specific findings anticipated from the work include the acceptability of this clinical aid; additional information concerning the man-machine interface; and the perceived worth of a clinical experience data base in the day-to-day care of patients.
This system should also serve as a mechanism to define the scope of information necessary to determine if high quality care is being delivered at reasonable cost.

RECORD NO. HS04073 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Computer-Stored Ambulatory Record (COSTAR)

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-01-80	08-31-82	166,980	166,980	353,524	BARNETT, G OCTO MASSACHUSETTS GENERAL HOSPITAL FRUIT ST BOSTON MASSACHUSETTS 02114

OBJECTIVE:
To develop automated techniques to increase the effectiveness and efficiency of health services, as delivered in ambulatory care settings.

APPROACH:
This project will develop capabilities for physician users of COSTAR (COmputer STored Ambulatory Record) to implement quality of care protocols and conduct routine data base analysis activities. A Medical Query Language (MQL) will be developed so that the data base analyses can be easily structured and completed by a physician without computer programming expertise. The user interaction characteristics of the MQL will be improved and its capabilities extended to include counting, sorting, pseudo-attribute definition, pre-stored and modifiable compilations, and value arrays for searches. Alternative strategies will be explored for archiving COSTAR data, such as partitioning the medical record by storing normal values, inactive medications, narrative text and other obsolete non-medical data elsewhere.

FINDINGS:
The successful development of an easily used medical query language will enable the health care provider and researcher to more efficiently and effectively assess the quality of care provided. Compliance to therapeutic schedules can be continuously reviewed; the entire medical practice, instead of a small sample, can be monitored; and practice reviews can be timely and concurrent instead of delayed and retrospective.

RECORD NO. HS04152 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Automated Ambulatory Medical Record Systems Follow-Up

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-80	12-31-81	48,999	48,999	53,897	WIEDERHOLD, GIO C STANFORD UNIVERSITY STANFORD CALIFORNIA 94305

OBJECTIVE:
To determine whether the findings and conclusions of a previous (1974-75) AAMRS study are still valid, or whether the field has progressed in ways that may have a significant impact on the design and implementation of future AAMRS; and to prepare a final report suitable for wide public dissemination that incorporates the findings and conclusions of the 1974-75 study and indicates how the field has progressed in the past five years.

APPROACH:
To permit a longitudinal comparison between sites that were visited in the 1974-1975 study and the current status of these sites, the follow-up study will use the same methodological approach as the 1974-1975 study. To keep the follow-up project costs to a minimum, it is proposed to use a smaller site visit team and to visit only a sample of the sites visited in the earlier study. The strategy of this study is to visit only those sites that appear to have made progress in breadth of operations or incorporated important innovations since 1975.

FINDINGS:
One of the most potentially valuable contributions of the proposed study is the description of the evolution of each project. The mortality rate of the computer-based information systems is amazingly high, and this study offers the possibility of identifying which projects have been terminated and why, which projects have been continued and why. In addition, the investigators have been encouraged to not just report the old survey form, but to also determine what has been the evolution of the project, what functional capability has been added or deleted, what user acceptance and support has been achieved, has the project become self-supporting, is the project still dependent on the presence of a key individual, what impact has the project had on other projects, is there any transferability, is there any commercial support or dissemination.

RECORD NO. 230760300 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Demonstration and Evaluation of the Use of Computerized Databank in Treating Coronary Artery Disease

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-76	11-15-80	0	2,776,344	2,776,344	ROSATI, ROBERT DUKE UNIVERSITY DURHAM NORTH CAROLINA 27710

OBJECTIVE:
To evaluate and continue to develop a clinical data bank for coronary artery disease and to test its transferability to another institution.

APPROACH:
The current databank will be extended and modified for operation in ambulatory settings. The evaluation will test the effect of the databank on the efficacy of treatment, patient outcomes, costs, and provider productivity. The system will be instituted in another institution in order to evaluate the feasibility of extending it to other hospitals and of pooling from multiple sources information based on common definitions and procedures.

FINDINGS:
By aggregating, analyzing, and making the clinical experiences of a large number and variety of patients available to the individual physician, chronic disease data banks have the potential to improve the individualization of therapies and the accuracy of prognoses.

RECORD NO. 233783008 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Demonstration of COSTAR V

PROJECT START	DATES END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
04-17-78	10-15-80	0	417,869	417,869	PIASECKI, PHILIP MEDICAL HEALTH GROUP 1012 OLD NORTH POINT ROAD BALTIMORE MARYLAND 21224

OBJECTIVE:
To demonstrate and evaluate the utility and acceptance of the COSTAR (Computer Stored Ambulatory Record) system developed under an earlier NCHSR grant by implementing the system in a multi-specialty, primary-care oriented health care delivery setting.

APPROACH:
Components of COSTAR to be tested include the systems for patient identification, registration, accounts receivable, medical records, and generating reports that are applicable to peer and utilization review and quality assurance. Design features aimed at enhancing COSTAR's exportability to other settings will also be evaluated.

FINDINGS:
Computerized information systems offer the means to eliminate voluminous files of paper records which by their sheer bulk and inherent lack of organization may hinder the practice of good medicine. The computer not only provides a mechanism for maintaining uniform, accurate, and comprehensive data relative to the clinical situation of the patient and the treatment regimen, it can also be used to monitor automatically the process of care. Computer based systems can also make available large, accurate data bases which may provide cost-effective opportunities to analyze the effectiveness and efficiency of various treatment processes.

RECORD NO. 233783011 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Exportation, Expansion and Dissemination of the PROMIS System

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-27-78	09-30-81	920,000	2,772,307	3,141,856	MILLER, DAVID A UNIVERSITY OF VERMONT 340 WATERMAN BUILDING BURLINGTON VERMONT 05401

OBJECTIVE:
The implementation of the Problem Oriented Medical Information System (PROMIS) at the Baltimore Cancer Research Center. The System was developed at the University of Vermont with NCHSR support, and now with the National Cancer Institute (NCI) will represent the first exportation of PROMIS.

APPROACH:
The PROMIS system will be expanded to include administrative functions at the Baltimore Cancer Research Center and to extend the data base critical for continued monitoring and upgrading of medical practice.

FINDINGS:
PROMIS has been designed to solve the problem of coordinating, retrieving, organizing, and monitoring information about patients and the services they are receiving. Traditional paper records are replaced with a computerized record that medical professionals retrieve and update directly as they provide services. All data are collated according to the medical problems to which they relate. Hence, each provider is aware of the reason for a service and of its relationship to the total care regimen.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. 233793021 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - INFORMATION SYSTEMS

TITLE: Technical Assistance and the Dissemination of a Computer Stored Ambulatory Medical Records System (COSTAR V)

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	09-29-81	38,966	566,856	752,151	KERLIN, BARBARA MITRE CORPORATION 1820 DOLLY MADISON BOULEVARD MCLEAN VIRGINIA 22102

OBJECTIVE:
This Contract is intended to provide technical assistance to commercial vendors who are engaged in providing COSTAR V services to health delivery sites. Additionally, the contractor, The MITRE Corporation will maintain the COSTAR V System and update it periodically with enhancements developed by the various users and developers of COSTAR V.

APPROACH:
The Contract calls for: 1. The maintenance of the COSTAR V system with new updated release made available every 8 months. 2. Technical assistance in COSTAR V installation techniques will be available for up to 2 man/months to commercial users that can demonstrate that they can provide COSTAR V services to multiple health delivery sites. 3. A clearinghouse of commercial vendors and users of COSTAR V will be developed.

FINDINGS:
Even in its early stages (3 months) this contract has attracted National and International interest. Letters requesting technical assistance in COSTAR V installation techniques have been received from more than a dozen commercial vendors. Two day training sessions starting Jan. 11-12, 1980 will be held each month. Plans indicate that a new release of COSTAR V will be made available approximately March 1, 1980.

RECORD NO. HS03582 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - SERVICE DELIVERY SYSTEMS

TITLE: Evaluation of a Summary Medical Record System

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-30-80	09-29-82	156,464	156,464	266,747

INVESTIGATOR NAME AND ADDRESS

SIMBORG, DONALD W
UNIVERSITY OF CALIFORNIA SAN FRANCISCO
3RD AND PARNASSUS AVE
SAN FRANCISCO
CALIFORNIA 94143

OBJECTIVE:
To evaluate a medical record for ambulatory care in which information is summarized, prioritized, time-oriented, and individualized for physician and patient.

APPROACH:
A summary medical record currently in use in an ambulatory clinic will be revised to provide patient problems and their manifestations, medications, and laboratory data in a time oriented fashion by means of a computerized system. This record will be evaluated as a replacement for the traditional medical record for most ambulatory encounters. Evaluation of this system will occur in selected medical specialty clinics. In the Rheumatology Disease Clinic (RDC), the summary medical record will be provided in addition to the manual record; subsequently, the manual record will be withdrawn. The control will be given both records at the time of the encounter. Clinics (Hepatitis, Pediatric, Asthma and Arthritis) Analysis will examine the potential savings results of a reduced requirement to provide the record to ambulatory clinics as well as impacts on clinical care.

FINDINGS:
Expected results of the proposed research include the finding that the summary medical record can validly substitute for the traditional medical record in virtually all outpatient visits; the finding that the summary medical record improves the communication of information over the traditional record by making more accessible the most important (summarized) clinical data and by displaying relationships between informational elements acquired over time and from various sources; the finding that physician acceptance of the record will be related to its high information return for effort expended, convenience, and the fact that it is customized to each patient and physician's needs; and the finding that full implementation will result in decreased clinic operating costs.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. HS04105 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - SERVICE DELIVERY SYSTEMS

TITLE: Telehealth in Anesthesia: Model for a Network

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
06-01-80	05-31-82	300,440	300,440	648,889	GRUNDY, BETTY L UNIVERSITY OF PITTSBURGH 4200 5TH AVE PITTSBURGH PENNSYLVANIA 15260

OBJECTIVE:
To assess Certified Registered Nurse Anesthetists' (CRNA's) need for consultation from physician anesthesiologists and demonstrate a telecommunication system to support comprehensive hospital based health services from a tertiary care hospital to a rural hospital. This project could serve as a model for regionalization of anesthesia care or comparable health services.

APPROACH:
The current patterns of CRNA practice will be determined by conducting structured telephone and mail interviews with approximately 2,500 practicing nurse anesthetists. The first mailing covering 4 states has been undertaken and due to less than a 70% response for 2 of the states, a follow-up telephone interview is being conducted. In addition, indepth interviews of CRNAs from opposite poles of opinions will be done by use of a selection process. The availability of anesthesia services in community hospitals will be determined by a telephone survey of 25% of hospitals with an average daily census of over 150. A methodology for the assessment of the quality of anesthesia care will be developed, consisting of a synthesis of classification schemes using existing sources and those discovered during the study. The process of care will then be analyzed using algorithms developed by the project staff. A state-of-the-art workshop has been held on anesthesia care and community hospitals and its findings will be widely disseminated.

FINDINGS:
It is anticipated that the study will show that there is some need for consultation by Nurse Anesthetists, especially those in rural hospitals. During the course of the project the combination of remote consultation, computer services, and new computer-based monitoring systems will be made accessible to a select group of small rural hospitals for the purpose of studying the impact of such technological assistance on morbidity and mortality. This should enable some small hospitals to perform selected operations without depriving patients of good quality care.

RECORD NO. 230770112 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - SERVICE DELIVERY SYSTEMS

TITLE: Demonstration of Computerized Decision Support System in a Nurse Practitioner-Staffed Rural Clinic

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED
09-29-77	07-31-81	0	310,335	310,335

INVESTIGATOR NAME AND ADDRESS

DAVIS, ELIZABETH
VISITING NURSE ASSOCIATION, INC
260 COLLEGE STREET
BURLINGTON
VERMONT 05401

OBJECTIVE:
To demonstrate the feasibility of a remote computerized record system in a nurse practitioner staffed rural health clinic and the impact of such a system on health and medical care delivery.

APPROACH:
The feasibility of a link between the computerized Problem Oriented Medical Record System (PROMIS) at the University of Vermont in Burlington and a rural health clinic in Grand Isle, in Lake Champlain, would be explored. If such a link were feasible, adaptations of guidance frames for delivery of care from the in-patient to the ambulatory setting would follow. Before and after data would be collected on the practice setting.

FINDINGS:
The installation of the link was accomplished. A microwave system was installed because a direct signal path to the University of Vermont was possible and the response rate between the terminals at Grand Isle and the computers at the University of Vermont was much faster by microwave than by telephone. Initial data were collected on the practice setting using the manual PROMIS. However, due to staff turnover in the interim, the before-after impact was changed to a case study approach. Adaptations of the CPROMIS guidance frames were found to be very time consuming as was their utilization by the nurse practitioner. There was resistance from most of the staff in using the system. The conclusion is that the system has potential but requires more time to implement.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH
SUMMARY OF GRANTS AND CONTRACTS BY RESEARCH CATEGORY - ACTIVE ON SEPTEMBER 30, 1980

RECORD NO. 233793015 CATEGORY: TECHNOLOGY & COMPUTER SCIENCE APPLICATIONS - SERVICE DELIVERY SYSTEMS

TITLE: Automated Hospital Information Systems Workbook

PROJECT DATES START	END	FY 80 $ AWARDED	TOTAL AWARDED	AWARDED + ESTIMATED	INVESTIGATOR NAME AND ADDRESS
09-30-79	06-30-81	0	245,658	245,658	BRIAN, EARL W UNIVERSITY OF SOUTHERN CALIFORNIA UNIVERSITY PARK LOS ANGELES CALIFORNIA 90007

OBJECTIVE:
To develop a loose-leaf, updatable Automated Hospital Information System (AHIS) Workbook to assist hospital decision-makers with processes related to AHIS, including familiarization; determination of need; assessment of benefits; projection of costs and savings; selection of optimum system and approach; and system acquisition, implementation, and technical/organizational management.

APPROACH:
The Workbook will be divided into five sections. Section I is an introduction which will explain the purpose of the document, describe its use, provide definitions for AHIS applications, and describe the AHIS Classification Scheme used in the Workbook. Section II involves hospital decision making including the gathering and evaluation of decision-making information; the identification, involvement, and direction of key hospital personnel in the decision-making process; the provisions of guidelines for acquiring special expertise in systems and computers, and the consideration of valid alternatives to AHIS prior to hospital commitment. Section III will provide the hospital with methods for projecting the costs and savings attendant with the implementation of an AHIS, including a discussion on the advantages and make-up of an effective benefits realization program. Section IV will provide guidance on the selection, acquisition, and operational management of an AHIS. In addition, an Appendix will be developed which will describe in standard terminology the functional capabilities of the currently available commercial systems.

FINDINGS:
It is expected that the AHIS Workbook will provide much needed guidance on the steps which should be taken in the selection, acquisition, implementation, and operation of an AHIS, including an outline for rational decision-making along the way. Upon release, it is also expected that a suitable organization will take responsibility for periodically up-dating the Workbook and using it as a foundation for establishing an AHIS hospital user educational service, including, workshops, seminars, and institutes. The results of these activities should be a significant improvement in the quality of hospital planning and decision-making relative to the complex and costly technology, and ultimately contribute to the goal of improving the efficiency and effectiveness of hospital care.

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